

"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.

UNIVERSITY OF TORONTO

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LIST

OF THE
FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

HD
5367
E 52
1897

WITH SUPPLEMENTARY LIST OF
MEMBERS, No. 1, APPENDED.



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"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.



LIST

OF THE

FEDERATED ENGINEERING AND
SHIPBUILDING EMPLOYERS WHO
RESISTED THE DEMAND FOR A
48 HOURS' WORKING WEEK.

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

HD
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“48 HOURS” DISPUTE—JULY, 1897 TO JANUARY, 1898.

NOTE.

In response to numerous applications (both home and foreign) for a list of the Firms who took an active part in resisting the demand for a reduction of the working hours from 54 to 48 per week—sought to be enforced by a large section of the workmen in the Engineering Industry of the United Kingdom—this List has been compiled by the Committee of the Engineering Employers’ Federation.

At the commencement of that long and memorable struggle, 180 Firms were involved; but the vital character of the issues brought daily accessions to the Federation, and on the following pages will be found the names of the 702 Firms who *successfully resisted* the attempt to enforce a

REDUCTION OF THE WORKING HOURS,

and who *vindicated*, but only after a prolonged stoppage of work, the Employers’ right to

FREEDOM OF MANAGEMENT.

HEAD OFFICE:

GLASGOW—105 WEST GEORGE STREET,

December, 1898.

"48 HOURS" DISPUTE—JULY, 1897 TO JANUARY, 1898.

The Federated Engineering and Shipbuilding Employers.

EXECUTIVE COMMITTEE

WHO ACTED *IN RE* THE "48 HOURS" DEMAND.

ENGINEERING REPRESENTATIVES.

ENGLAND.

BARROW—

Mr. A. ADAMSON, - - - - - of Messrs. Vickers, Sons & Maxim, Limited.

BOLTON—

Sir B. A. DOBSON, - - - - - ,, Dobson & Barlow, Limited.

HULL—

Mr. A. E. SEATON, - - - - - ,, Earle's Shipbuilding and Engineering Co., Limited.

KEIGHLEY—

Mr. J. W. DARLING, - - - - - ,, Darling & Sellers, Limited.

LEICESTER—

Mr. GEORGE JESSOP, - - - - - ,, Jessop & Appleby Bros., Limited.

LIVERPOOL AND BIRKENHEAD—

Mr. JOHN LAIRD, - - - - - ,, Laird Bros., Birkenhead.

LONDON AND DISTRICT—

Mr. JOHN DONALDSON, - - - - - ,, John I. Thornycroft & Co.

Mr. ALEX. SIEMENS, - - - - - ,, Siemens Bros. & Co., Limited.

Mr. T. PERCIVAL WILSON, - - - - - ,, Easton, Anderson & Goolden, Limited.

Ship Repairers' Representative—

Mr. GEO. FLETCHER, - - - - - ,, 9 London Street, Fenchurch Street, E.C.

MANCHESTER AND DISTRICT—

Colonel HENRY C. S. DYER, - - - - - ,, Sir W. G. Armstrong, Whitworth & Co., Limited.

Mr. J. W. HULSE, - - - - - ,, Hulse & Co., Limited.

Mr. JOHN M'QUEEN, - - - - - ,, John Hetherington & Sons, Limited.

The following List is divided into two Sections.

SECTION I.—Arranged Alphabetically—pp. 10 to 58.

SECTION II.—Arranged under Trade Headings—pp. 59 to 160.

SECTION I.

ARRANGED IN ALPHABETICAL ORDER.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEP NC
					6295
Atlas Engineering Co., The ...	Engineers and Machine Tool Makers	Chapel St., Levenshulme	Near Manchester	Atla Works, Levens-	
Ayrton, William, & Co. ...	Engineers and Sewing Machinists, etc.	Gorebrook Ironworks, Longsight	Manchester ...	hulme Spooler, Manchester	
Bailey & Garnett, Ltd. ...	Machinists ...	Eagle Ironworks...	Stalybridge ...	Bailey & Garnett, Stalybridge	135
Bailey, W. H., & Co., Ltd. ...	Engineers ...	Albion Works, Salford ...	Manchester ...	Beacon, Salford ...	991
Baldwin, James... ...	Engineer, Brassfounder and Steam Fittings Maker	Devonshire Brass Works, Park Wood Street	Keighley	Baldwin, Engineer, Keighley	
Barclay, Curle & Co., Ltd. ...	Shipbuilders and Marine Engineers, Engine, Boiler and Ship Repairers	Shipyard—Whiteinch ...	Glasgow	Barclay, Whiteinch, by Glasgow	3193
Barker, John, & Sons, Ltd. ...	Hoist and Crane Makers	Engine Shop—36 Finnieston Street	... ...	... ...	551
Barlow, H. B., & Co. ...	Engineers ...	Boilermaking and Ship Repairing Works—88 Kelvinhaugh Street	... ...	... ...	1269
Barns, J. C. ...	Brassfounder ...	Park Street Ironworks ...	Oldham	Barkers, Engineers, Oldham	75
Barracough, Joseph, & Sons ...	Ironfounders, Engineers and Brassfounders	Cornbrook Works, Chestnut Road,	Manchester ...	Works, Manchester	3685
Barrett, R., & Sons, Ltd. ...	Iron and Brass Founders ...	Union Street, Borough ...	London, S.E.		
Barry, Henry, & Co., Ltd. ...	Engineers for Transmission of Power and Material	Union Foundry ...	Barnsley ...	Pulley, Barnsley ...	48
Beck & Co., Ltd. ...	Hydraulic Engineers, Brassfounders, etc.	King's Head Court, Beech Street	London, E.C.	Gunmetal, London...	9 Ba
Beeley, Thomas... ...	Boilermaker and Engineer ...	West North Street	Aberdeen ...	Aberdeen ...	333
		130 Great Suffolk Street...	London, S.E.	London, S.E.	860 H
		Hyde Junction Ironworks Hyde, ...			

	Paddington			
etc.				
<i>e, James, & Sons</i>	Machine Tool Makers	,	..	..
<i>s, Edward, & Co., Ltd.</i>	Machine Stoker and Conveying Plant Engineers	..	..	..
<i>n, William</i>	Engineer	...	...	...
<i>ey & Jackson, Ltd.</i>	Papermakers' Engineers and Ironfounders (See <i>De Bergeac & Co., Ltd.</i>)	..	..	..
<i>, Francis, & Sons</i>	Engineers' Tool Makers	..	..	..
<i>, Henry, & Co. ...</i>	Hydraulic Engineers	...	..	..
<i>, John</i>	Engineer and Ironfounder	..	..	..
<i>um, James, & Son, Ltd</i>	Paper Mill and Rubber Mill	..	..	..
<i>ums, Ltd. ...</i>	Engineers' Engineers and Steam Engine Builders	..	..	..
<i>, Peacock & Co., Ltd.</i>	Papermakers' Engineers and Machine Tool Makers	..	..	..
<i>ood, J., & Son</i>	Locomotive Builders and Machine Tool Makers	..	..	..
<i>rton & Newton ...</i>	Engineers, Ironfounders and Machinists	..	..	..
<i>Brothers ...</i>	Special Metal Manufacturers	..	..	..
<i>G., & Co. ...</i>	Engineers' Tool Makers	..	..	..
<i>, J., & Co. ...</i>	Machine Tool Makers and Engineers	..	..	..
<i>, William ...</i>	Ironfounders	...	..	..
<i>burn & Crawshaw</i>	Ironfounder	...	..	..
	Makers of Tools and Machines for Tin, Zinc and Sheet Iron Workers	..	..	..
	Hosiery Machinists	...	..	..
	Atlas Works	...	..	..
	Blackboro', Nottingham	..	..	..
	Nottingham	..	..	..
	Nottingham	..	..	..
	Cavendish Square			
	Clyde Engine Works,	Glasgow	...	Bennie, Polmadie, Glasgow
	Polmadie	...		Bennies, Bolton
	Lancashire Stoker Works, Deansgate	Bolton	...	104
	28 Victoria Street	London, S.W.	...	
	Robin Hood Street	Nottingham	...	
	Lodge Bank Works	Bury	...	
	Calender, Bury	...		
	Sowerby Bridge	Berry, Sowerby Bridge	25	
	Leeds...	Rivett, Leeds	557	
	Halifax	Berry, Halifax	341	
	Leith Walk Foundry	Edinburgh	521	
	St. Katherine's Works, Sciennes	Edinburgh	645	
	Gorton Foundry	Manchester	255	
	Tempest Street	Wolverhampton		
	Longport	Staffordshire		
	Victoria Iron Works, Water Lane	Halifax	...	Bronze, Longport ...
	Islington Tool Works, Self. rd	Manchester	...	Burns, Burslem
	Portobello Foundry	Sunderland	...	
	Laygate Street	South Shields	...	
	Paragon Works, Wood Street	Wakefield	...	
	Paragon, Wakefield	...		
	Blackboro', Nottingham	...		
	Nottingham	..		
	Nottingham	..		

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)		TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
		TOWN.	TELEGRAPHIC ADDRESS.			
ackburn, Joseph ...	Electrical Engineer and Contractor	Gresham Works ...	Nottingham ...	Blackburn, Port-Glasgow	Blackburn, Nottingham	238
ackburn Loom and Weaving Machinery Making C (William Dickinson & Sons) Ltd.	Iron and Brass Founders, Makers of Looms, Sizing, Winding, Warping, etc., Machinery	Phoenix Iron Works Rose Hill Foundry	Blackburn	Phoenix, Blackburn	Phoenix, Blackburn	II
ackwood & Gordon	Marine Engineers, Shipbuilders, and Boilermakers ; Engine, Boiler and Ship Repairers	Castle Building Yard and Slip	Port-Glasgow	Blackwood Gordon, Port-Glasgow	Blackwood Gordon, Port-Glasgow	4
air & Co., Ltd. ...	Marine Engineers, Boilermakers and Ironfounders	Norton Road	Stockton-on-Tees	Blair, Stockton-on-Tees	Blair, Stockton-on-Tees	2 P.O. 12 Nat. 130
ake, Barclay & Co. ...	Engineers ...	Victoria Works	Greenock	Filter, Greenock	Filter, Greenock	...
andell's London Copper and Brass Works Co., Ltd.	Engineers, Coppersmiths and Brassfounders	23 25 West India Dock Road, Limehouse	Londen, E. ...	Blundell, London	Blundell, London	29 Easter
dden, William, & Son ...	Spindle Manufacturers	Hargreaves Works	Oldham	Boden, Oldham	Boden, Oldham	5
lton Engineering Co., The	Engineers, Ironfounders [*] and Tool Makers	Turton Street	Bolton	Bec, Bolton	Bec, Bolton	191
lton Iron and Steel Co., Ltd.	Steel Manufacturers ...	Blackhorse Street	Bolton	Hammer, Bolton	Hammer, Bolton	161
lton, Rodger, & Son ...	Brassfounders, Coppersmiths etc. ...	44 and 46 Standishgate	Wigan	... ...	... ...	29
oth, Joseph, & Brothers ...	Engineers and Crane Manufacturers	Union Foundry and Ironworks, Rodley	Leeds	Cranes, Rodley	Cranes, Rodley	20 Stanning
owen & Co. ...	Engineers, Brass and Aluminium Founders	6 Mount Pleasant, Clerkenwell	London, W.C.	Bowenite, London	Bowenite, London	623 King's Cross
ow, M'Lachlan & Co. ...	Marine and General Engineers, Boilermakers, Ironfounders and Contractors	Thistle Works	Paisley	Bow, Paisley	Bow, Paisley	6
adbury & Co., Ltd. ...	Sewing Machine and Cycle Makers, and Makers of Automatic and Labour Saving Tools for Engineers	Wellington Works	Oldham	Rotary, Oldham	Rotary, Oldham	242
adbury, T. H. ...	Engin:er ...	...	...	...	...	...

ord, T., & Co.	Laundry Engineers	... ...	Crescent Ironworks, Salford	Manchester ...
ey & Craven	Brickmaking Machinery' Manufacturers	... ...	Westgate Foundry	Craven, Wakefield ...
ey, R., & Co.	Engineers and Machinists	... ...	Victoria Foundry	Boiler, Wakefield ...
ner Machine Co.	Printers' Engineers	... ...	Wharfedale Ironworks	Bremner, Otley
es, Thomas, & Sons	Engineers	... ...	Horseley Fields	Bridges, Wolverhampton
ey, T., & Co.	Fan Makers	... ...	... ...	Brierley, Engineers, Oldham
tside Foundry Co., Ltd.	Ironfounders and Engineers	... ...	Newhall Ironworks	Castings, Sheffield ...
lbent, T. W.	Electrical Engineer	... ...	Victoria Electrical Works	Broadbent, Electrician Huddersfield
lbent, Thomas, & Sons, Ltd.	Engineers and Ironfounders	... ...	Central Ironworks, Vulcan Street	Broadbent, Huddersfield
l, G., & Son	Bronze and Brassfounders	... ...	41 and 42 Windmill St., Tottenham Court Road	Outpouring, London
e, John, & Co., Ltd.	Dry Dock Proprietors, Shipbuilders, Engineers and Boilmakers	... ...	13 Fenchurch Buildings...	Imbat, London
x, T., & Co.	Engineers and Machine Makers	... ...	Commercial Dry Dock ...	London, E.C.
rs & Doxey, Ltd.	Textile Machinists	... ...	Chapel Hill ...	Rotherhithe Huddersfield
n Brothers & Co., Ltd.	Engineers and Ironfounders	... ...	Registered Office—Union Ironworks, West Gorton Branch Works—Junction Ironworks, Newton Heath	363
n, John, & Co., Ltd.	Steel Manufacturers	... ...	Town Office—15 Market Street	Manchester ...
n's Dry Dock and Engineering Co., Ltd.	Ship Repairers, Marine Engineers and Dry Dock Proprietors	... ...	Rosebank Ironworks, Broughton Road	... ...
			Atlas Works, Saville Street, East	Edinburgh ...
			10 London Street	Sheffield ...
			Polar Dry Dock, Wharf Road	London, E.C.
				London, E. London ...
				Hydraulic, Edinburgh ...
				Atlas, Sheffield ...
				Reparans, London ...
				2494 Avenue
				Town Office 605
				16
				29

NAME.	NATURE OF BUSINESS, (See <i>Donkin, Bryan, & Co., Ltd.</i>)	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.	
					15 Eccl	
Browett, Lindley & Co., Ltd.	Steam Engine Makers	... Sandon Works	... Patricroft	...	Sandon, Patricroft	...
Bryan Donkin & Co., Ltd.	Engineers, Millwrights and Iron-founders	Castle Ironworks Millsands ...	Oldham Sheffield	... Engines, Oldham ... Wm. Buckley, Shef-	... 8 field	2232
Buckley & Taylor	Piston and Lathe Manufacturers	Meadow Road	Leeds	... Bucktons, Leeds	... 724	
Buckley, William, & Co.	Engineers and Tool Manufacturers	Cannock Chase Engine Works	Hednesford	... Bags, Hednesford		
Buckton, Joshua, & Co., Ltd.	Engineers	Moore Park Boiler Works, Govan	Glasgow	... Burnet, Glasgow	... 1513	
Bumsted & Chandler	Engineers and Boilermakers	Gibbet Street	Halifax	... Butler, Halifax	... 216	
Burnet, Lindsay, & Co.	Machine Tool Makers and Iron-founders	Globe and Saunder Bank Ironworks; also West Gate Weaving Shed	Burnley	... Globe, Burnley	... 6A, 6B	
Butler, J., & Co.	Iron and Brassfounders, Makers of Looms for Cotton, Linen and Worsted Goods, Winding, Warping, and Sizing Machines Worsted, Woolen, Felt and Twine Machine Manufacturer and Iron and Brass Founder	Sweet Street Foundry	Leeds	... Bywater, Leeds	... 1217	
Butterworth & Dickinson	...					
Sywater, William	...					
Caird & Co., Ltd.	Marine Engineers and Shipbuilders	Engine Works—Arthur St. Shipyard & Graving Dock —Dalrymple Street	Greenock	... Company, Greenock	... 5	
Caird & Rayner	Engineers and Coppersmiths	777 Commercial Road	London, E.	... ...	... 71	
Caledon Shipbuilding and Engineering Co., Ltd. (late W. B. Thompson & Co., Ltd.)	Engineers and Shipbuilders	Lilybank Engine Works, Caledon Shipbuilding Yard	Dundee	Vaporize, London	... 210 East	

Calender's Cable and Construction Co., Ltd.	Electrical Engineers, etc.	... 90 Cannon Street Factory—Belvedere, ...	London, E.C. Kent	Calender, London ...	5133 Bank II Wool
Calvert & Co. ...	Ironfounders, Engineers and Millwrights	Hope Foundry and Rashcliffe Ironworks	Huddersfield	...	...
Calvert, T. C. ...	Ironfounder ...	Pallion Foundry ...	Sunderland	Calvert, Pallion Foundry, Sunderland.	...
Cameron, John ...	Maker of Steam Pumps and Ship-builders' Tools	Oldfield Road Ironworks, Salford	Manchester	Original, Manchester	2002
Cammell, Charles, & Co., Ltd.	Steel Manufacturers ...	Cyclops Works, ...	Sheffield	Cammell, Sheffield ...	
Campbell & Calderwood ...	Marine and General Engineers, and Centrifugal Pump Makers	Soho Engine Works ...	Paisley	Soho, Paisley	874
Campbells & Hunter ...	Engineers and Machine Tool Makers	Dolphin Foundry, Saynor Road, Hunslet	Leeds	Dolphin, Leeds	162
Campion Cycle Co., Ltd. ...	Cycle Manufacturers ...	Liverpool Street ...	Nottingham	Campion, Nottingham	551
Carmichael, James, & Co., Ltd. ...	Engineers, Millwrights, Boilermakers and Forgemasters	Ward Foundry ...	Dundee	Corliss, Dundee	363
Carrick & Ritchie ...	Engineers, Crane & Turbine Makers	Waverley Ironworks, Norton Park, London Road	Edinburgh	Crane, Edinburgh	853
Carrick & Wardale ...	Engineers and Founders ...	Redheugh Engine Works	Gateshead-on-Tyne	Wardale, Gateshead	11027
Carruthers, J. H., & Co. ...	Steam Pump Manufacturers	Hamilton St., Polmadie	Glasgow	Hoisting, Glasgow ...	3601
Carter Brothers ...	Engineers and Millwrights ...	Bridge Street Ironworks	Rochdale	Carter Brothers,	
Carter, James, & Sons ...	Iron and Brass Founders ...	Atlas Works ...	Stalybridge	Rochdale	
Central Marine Engine Works, The (Sir W. Gray & Co., Ltd.) ...	Marine Engineers, Boilermakers, Iron and Brass Founders, Makers of Forgings, Stampings and Evaporators, Dry Dock Owners and Ship Repairers	Central Engine Works ...	West Hartlepool	Central, West Hartlepool	106
Chadburn & Son, Ltd. ...	Ships' Telegraph Manufacturers ...	11 Waterloo Road	...	Liverpool	18 P.O. 248 Nat.
Chadwick, James ...	Ironfounder and Range Maker	School Hill Ironworks ...	Bolton	...	826
Chaplin, Alexander, & Co. ...	Engineers and Cranemakers	Helen Street, Govan ...	Glasgow	Chaplin, Glasgow	147

NAME.	NATURE OF BUSINESS,	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Chapman, Carverhill & Co. ...	Iron and Brass Founders ...	... Dunn Street ...	Newcastle-on-Tyne	... ... ...	1189 Nat.
Chapman & Furneaux (late Black, Hawthorn & Co.) ...	Locomotive Builders, etc ...	... East Street Works ...	Gateshead-on-Tyne	Blackthorn, Gates-head-on-Tyne	126 P.O. 2116 Nat.
Charlesworth, S., & Co. ...	Electrical and Printers' Engineers Machinists, etc.	Richmond Hill Ironworks Werneth Works—New Cross Road, near S.E. Ry. Station City Office—22 Queen St., Cheapside	Oldham	Charlesworth, Engineers, Oldham	63
Clark, Bennett & Co., Ltd. ...	Hydraulic and General Engineers and Founders	Victoria Works, St. James Road Southwick ...	Gateshead-on-Tyne Sunderland ...	Engineers, Oldham ...	120 Deptford
Clarke, Chapman & Co., Ltd.	Electrical and General Engineers	Raglan Foundry ...	Bradford	Cyclops, Gateshead Clark, Sunderland	137 and 138 4 P.O. 21 Nat.
Clark, George, Ltd. ...	Marine Engine and Boiler Builders	Havelock Works ...	Leicester	Clarke, Havelock Works, Leicester	
Clark, J. & T. ...	Engineers, Millwrights, Brass and Ironfounders	Atlas Ironworks ...	Blackburn	Goodfellow, Blackburn	27
Clarke, T. A. W. ...	Engineer and Machine Maker	... ...		
Crayton, Goodfellow & Co., Ltd. ...	General Engineers and Millwrights	Atlas Works, Woodfield Road, Harrow Road Hunslet ...	London, W. ... Leeds ...	Brickpress, London Gas, Leeds ...	543
Crayton, Howlett & Co. ...	Engineers and Ironfounders	... ...	Near Huddersfield London, W.	Cliff, Milnsbridge ... Infusible, London	22 Milns-bridge
Crayton, Son & Co., Ltd. ...	Makers of Gas Holders, Boilers, and all kinds of Constructional Ironwork	Longwood ...			
Clyffe & Co. ...	Woollen Machine Makers ...	... 51 Sinclair Road, Kensington ...	Clydebank, N.B.	Shipyard, Clydebanks	812 Glasgow
Clyffe, E. H. ...	Electrical Engineer and Motor Car Maker	... ...			1 Clydebank
Clydebank Engineering and Shipbuilding Co., Ltd., The	Marine Engineers and Shipbuilders				
Clyne, Mitchell & Co. ...	Engineers and Boilermakers	Commercial Road ...	Aberdeen ...	Clyne Mitchell, ...	438

Coates, Victor, & Co., Ltd.	Engineers, Boilermakers and Lagan Foundry ...	Belfast	... | Lagan Foundry, Belfast	93
Founders	... |	Multitube,	Birkenhead	12
Engineers, Boilermakers, Steam	54 Duke Street and	Birkenhead	... | Multitube, Birkenhead	
Launch and Boatbuilders, Iron-	Bidston Wharf			
founders, Brassfounders				
Cockburn, David	Safety Valve Maker ...	132 M'Neill Street	Glasgow	1281
	... | Safety Valve Makers ...	Sussex Street, Kinning Park	Glasgow	1854
Cockburn, George, & Co.	Engineers and Boilermakers	Park Road, Ironworks, St. Ann's Rd., Burdett Rd.	London, E.	277 Eastern
Cole, T. & W.	Machinists, Engineers and Mill-	... | ...	Belfast	18 and 19
Combe, Barbour & Combe,	wrights			
Connell, Charles, & Co.	Shipbuilders ...	Scotstoun Shipbuilding Yard, Whiteinch	Glasgow	1192
Cook, S., & Co.	Springmakers and Machinists	Albert Works ...	Bury	30
Cooke, W.	Engineer ...	Lenton Boulevard	Nottingham	515
Cooper Brothers, Ltd.	Loom Makers ...	Bethesda Street Foundry	Burnley	141
Corinthian Engineering Co., The	... | ...	Grant Street ...	Nottingham	
Cotton, Stephen, & Co.	Machine Makers and Ironfounders	... | ...	Belfast	
Coubro & Scrutton	Engine and Shipsmiths, Mastmakers, Joiners and Shipwrights	18 Billiter Street ...	Stephen Cotton, Belfast	
Coulthard, T., & Co.	... | Printing Machine Makers	11 West India Dock Rd. Cooper Road	Coubro, London	5007 Eastern
Coulthurst, H. J. & A.	Engineers and Millwrights	... | Robert Street Foundry	Coulthards, Preston	140
Cowans, Sheldon & Co., Ltd.	Crane and Turntable Manufacturers	St. Nicholas Works	Darwen	11
Cowen, G. R., & Co. ...	Engineers, Founders and Boiler-	Beck Works	Carlisle	St. Nicholas, Carlisle
Craig, A. F., & Co., Ltd. ...	makers	... |	... | Nottingham	1013
				Cowen, Nottingham
				87
				Craig, Paisley
				20

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Deptford Dry Docks Co., Ltd.	Engineers and Ship Repairers	Deptford ... City Office—88 Bishopsgate Street	London, S.E.	Shoring, London ...	71 Deptford ...
Dewhurst, C. H.	Gas Engine Maker	... ... Gas Engine Works	London, E.	Dewhurst, Keighley	... ...
Dewrance & Co.	Engineers, Makers of Engine and Boiler Fittings for High Pressure Steam	158 Great Dover Street ...	London, S.E.	Dewrance, London	... ...
Dickinson, John, & Co.	Engineers and Machine Tool Makers	Devonshire Works ...	Keighley	Dickinson, Keighley	45
Dickinson, John, & Sons, Ltd.	Engine and Boiler Builders ...	Palmer's Hill Engine Works	Sunderland ...	Bede, Sunderland ...	24 P.O. 20 Nat.
Dickson, J. W. ...	Brassfounder ...	66 Plumber's Row, Whitechapel	London, E.	Leeds ...	... ...
Dixon, S., & Son	Brassfounders ...	Swinegate ...	Leeds ...	Brass, Leeds	... ...
Dobson & Barlow, Ltd.	Makers of Cotton Spinning Machinery	Kay Street Works ...	Bolton	Dobson's, Bclton	... ...
Dodd, Samuel ...	Machinist ...	Lyon Works, Werneth ...	Oldham	Dodd, Oldham	... ...
Donkin, Bryan, & Co., Ltd.	Gas and General Engineers, Millwrights, Founders and Machinists	55 Southwark Park Road, Bermondsey	London, S.E.	Donkin Company, London	662 Hop.
Douglass Brothers, Ltd.	Iron Manufacturers ...	Globe Ironworks ...	Blaydon-on-Tyne	Douglass, Blaydon ...	6222
Douglas Forge Co., Ltd.	Engineers and Ironfounders ...	Scholes Bridge ...	Wigan	... ...	... ...
Douglas Fraser & Sons	(See <i>Fraser, Douglas, & Sons</i>)	35 and 36 Great George St.	Leeds ...	Dou�ill, Leeds	... ...
Dou�ill, Alf., & Co., Ltd.	Gas and Oil Motor, Hydraulic, Steam and Hot Water Engineers	Barnbrook Ironworks ...	Bury ...	Barnbrook, Bury	... ...
Downham, J., & Co. ...	Bleachers' Engineers ...	Pallion Yard ...	Sunderland ...	Doxford, Sunderland	37
Doxford, W., & Sons, Ltd. ...	Ship and Engine Builders ...	Atlas Works ...	Oldham	Atlas, Oldham	413 & 414 Na
Dronfield Brothers, Ltd.	Card Grinding Machinists ...	... ...	... ...	... ...	57
Dryden, Thomas	Millwright and Engineer ...	... ...	... ...	Dryden, Preston	36
	Grimshaw Street Foundry	... ...	... ...	Preston	

Dubs & Co.	...	Locomotive Builders	London Road Glasgow Works	Glasgow Locomotive Works	Glasgow	... Dubs, Glasgow ...	702
Duncan, Robert, & Co., Ltd.	...	Shipbuilders, Ship Repairers, Mast and Spar Makers	...	Port-Glasgow	Dunoon, Port-Glasgow	59	
Dunlop, David J., & Co.,	...	Marine Engineers, Boilermakers and Shipbuilders	Inch Works	Port-Glasgow	Inch, Port-Glasgow	8	
Dunsmuir & Jackson	...	Marine Engineers and Boilermakers	Windsor Street, Govan	Glasgow	Dunsmuir Jackson, Glasgow	1564	
Dunston Engine Works Co., The	...	Engineers and Boiler Builders	...	Dunston-on-Tyne	Archer, Dunston-on-Tyne	1287	
Dykes, G. & J.	...	Engineers	Bury Ground Ironworks	Bury	...	...
Earle's Shipbuilding and Engineering Co., Ltd.	...	Engineers, Shipbuilders and Boiler-makers	...	Hull	Earles, Hull ...	...	61 and 78
Easton, Anderson & Goolden, Ltd.	...	Millwrights, Steam, Electric and Hydraulic Engineers, Boiler-makers and Founders	Erlith Iron Works, Broad Sanctuary, Chamb- bers, Westminster	Erith, Kent ... London, S.W.	Eastons, Erith Egyptian, London ...	...	4 Dartford West-mins
Eastwood, Walter	...	Brassfounder	Globe Brass Works	Ashton-under-Lyne	...	...	545 mins
Eclipse Machine Co., Ltd.	...	Cycle, Sewing and Knitting Machine Makers (See Allen, Edgar, & Co., Ltd.)	Rochdale Road	Oldham	Eclipse, Oldham	...	
Edgar Allen & Co., Ltd.	...	Iron and Brass Founders	...	London, E.	...	...	31 Stratfor
Edie, Henry, & Co.	...	Engineers to Bleachers, Dyers, etc.	The Bow Foundry, Bow Victoria Foundry, Canning Town, E.	Manchester ...	...	...
Edmeston, Archd., & Sons	...	Electrical Engineer	Cannon Street Iron Works, Adelphi, Salford	Leeds ...	Edmeston, Adelphi, Salford	1595	
Edmondson, John A.	...	Engineers and Tool Makers	Globe Electrical Works, Kirkstall Road	Johnstone ...	Armature, Leeds ...	1086	
Edwards, George, & Co.	...	...	Hercules Iron Works	Johnstone ...	Edward, Johnstone	...	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.		TELEPHONE No.
				TELEGRAPHIC ADDRESS.	TELEPHONE No.	
Frost & Sons ...	Brassfounders ...	8 Allen Street, Goswell Rd	London, E.C.	Vulcan, Paisley	... 63	
Fullerton, Hodgart & Barclay, Ltd.	Engineers, Millwrights, Founders, and Makers of Hydraulic Machinery	Vulcan Foundry & Engine Works	Paisley	Middlesbro'	Westgarth, Middlesbro'	21 P.O. 202 Nat.
Furness, Sir C., Westgarth & Co., Ltd.	Marine and General Engineers and Boilermakers	Commercial Street	... Middlesbro'	... Furnival, Reddish	... 30 Stockport	
Furnival & Co. ...	Printers' Engineers ...	Reddish Ironworks, near Stockport	Manchester	... Manchester	... Gadd, Manchester ..	1427
Gadd, Thomas (Hulse & Co., Ltd., Proprietors)	Millwrights and Machinists	Ordsall Works, Regent Bridge, Salford	Manchester	... Manchester	... Galloway, Manchester	195 1954
Galloway, Ltd. ...	Engineers and Boilermakers	Knott Mill Ironworks ... Branch Ironworks, Ardwick	... London E.C.	Rough, London ..	... 2866 Avenue	
Gazelle Cycle Co.,	Cycle Manufacturers ...	17 Philpot Lane ... Russell Street	... Nottingham	Gazelle, Nottingham	799	
General Electric Co., Ltd., The	Electrical Engineers and Manufacturers	Peel Works, Adelphi, Salford.	Manchester	... Sparkless, Manchester	2186	
Gibson, J., & Co.,	General Pattern Makers, Machine Joiners and Wood Turners	Warehouse and Showroom—Electricity Buildings, Victoria Bridge Alpha Street, Dewsbury Road	... Leeds	... Induction, Manchester	1643	
Gimson & Co. (Leicester), Ltd.	Engineers, Ironfounders, Boiler-makers and Machinists	Vulcan Works	... Leicster	... Patterns, Leeds ..	... 180	
Gimsons, Ltd. ...	Engineers and Millwrights ...	Stalybridge	... Stalybridge	... Gimson, Leicester ..	6 and 734	
Ginnan, R., & Son ...	Engineers ...	Eton Road	... Eton Road	... Plumstead, Kent	120	
						Ginnans, Founders, Plumstead, Kent

Glover, M., & Co. ...	Engineers ...	Winguts and Dry Dock Proprietors	Glenallan Road, Minwall Holbeck Lane ...	Leeds ...	Glovers, Engineers, Leeds	984
Good & Menzies, Ltd. (late Thompson & Stather)	Engineers ...	Engineers, Millwrights, and Machinists	Green Lane Foundry ...	Hull ...	Iron, Hull ...	66
Goodwin, Arnold, & Son ...	Engineers ...	Engineers and Shipbuilders	56 Summer Street, South- wark Bridge Dundee Foundry ..	Dundee ...	Shaftman, London Gourlay, Dundee ...	569
Gourlay Brothers & Co. ...	Engineers ...	Fuel Economiser Manufacturers	Wakefield Works	Wakefield ...	Economiser, Wakefield	43
Green, E., & Son, Ltd. ...	Shipbuilders, Engineers and Dry Dock Proprietors	13 Fenchurch Avenue ...	London, E.C.	Green, Blackwall,	203 Eastern	
Green, R. & H., Ltd. ...	General Engineers and Boilermakers	Blackwall Yard ...	London, E.	London, ...	London	
Green, Thomas, & Son, Ltd. ...	Marine Engineers, Boilermakers and Founders	Smithfield Ironworks ...	Leeds ...	Smithfield, Leeds ...	Leeds	158
Greenock Foundry Co., The	Engineers and Tool Makers, Elec- trical Engineers, Cartridge Makers, Torpedo Makers, etc.	Surrey Works, Blackfriars Road ...	London, E.	... ...	... ...
Greenwood & Batley, Ltd. ...	Albion Works, Victoria Foundry and Cape Mills	Greenock ...	Greenock ...	Scott, Greenock ...	Greenock, ...	114
Gregg, W., Sons & Phoenix	16 Great George Street, Westminster	Leeds ...	Leeds ...	Greenwood, Leeds ...	Leeds ...	270
Gregson & Co. ...	High Street ...	Belfast ...	London, S.W.	Outflank, London		
Greig, John, & Sons ...	Billiter Buildings ...	London, E.C.	Gregides, London ...			
Gresham & Craven, Ltd. ...	Prince of Wales Road,	London, E.	... ...		
Grieve, John, & Co. ...	Custom House	Edinburgh ...	Greig, Edinburgh ...			
Günther, W., & Sons ...	Fountain House, Dundee Street ...					
	Brake and Injector Manufacturers, Engineers, etc.	Southall St., Ordsall Lane,	Brake, Manchester ...			613
	Engineers and Cranemakers	Salford, Motherwell and Engine Works	Motherwell ...	Grieve, Motherwell		
	Engineers ...	Central Engineering Works	Oldham ...	Günther, Oldham ...		317

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).			TOWN. London, E.C.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
		Brooke Street	Holborn	Works,			
Hacking & Co. ...	Hydraulic and General Engineers ...	... Makers of Looms and Preparation Machinery	Lord Street	...	Bury ...	Hacking, Bury	31
Hague, B., & Co. ...	... Hosiery Machine Maker	... Rodent Street	...	Nottingham	...	...	556
Haigh, John, & Sons, Ltd. ...	Machinists ...	... Firth Street	...	Huddersfield	Haighs, Machinists, Huddersfield	...	111
Haigh, W. B., & Co., Ltd. ...	Sawmill Engineers ...	... Globe Iron Works, Plane Street	...	Oldham	Haigh, Oldham	...	146
Haley, E. & W. H. ...	Ironfounders and Cast Iron Pipe Makers	... Shipbuilders, Engineers and Boiler- makers	Thornton Road	...	Bradford	Castings, Bradford	467
Hall, A., & Co. ...	... Engineers and Makers of Refriger- ating Machinery	... York Street	...	Aberdeen	Hall, Aberdeen	...	290
Hall, J. & E., Ltd. ...	Electrical and General Engineers ..	Dartford Ironworks 23 St. Swithin's Lane	...	Dartford	Dartford, Dartford	...	7
Hall, J. P., & Co. ...	... Ironfounders and Machinists ...	Blackfriars Ironworks, Werneth	...	London Oldham	...	...	846 Bank
Hall, John, & Son ...	... Engineers, Boilermakers and Ship- builders	Union Ironworks, Park St.	...	Oldham	Dynamo, Oldham	...	300
Hall, Russell & Co. Ltd. ...	... Makers of all kinds of Worsted Machinery and Machines for Mohair and Silk	Yorke Place	...	Aberdeen	Ironfounders, Oldham	...	161
Hamer, S. H. ...	Tool Maker ...	Park Works	...	Keighley	Hal Russell, Aberdeen	...	273
Hamilton, William, & Co. ...	Shipbuilders ...	...	...	Stells, Keighley	Stells, Keighley	...	10
Hamilton, Woods & Co., Ltd. ...	(See Woods, Hamilton, & Co., Ltd.)	The Lathe Chuck Works, Range Lane	...	Halifax	Hamer, Range Lane Halifax	...	23
Hanna, Donald & Wilson ...	Engineers, Shipbuilders, and Iron- founders ...	Glen Shipbuilding Yard	...	Port-Glasgow	Hamilton, Port-Glasgow	...	Paisley
			...			Donald, Paisley	72

Harfield & Co., Ltd.	... Engineers	... ...	... Blaydon Ironworks	... Blaydon-on-Tyne	Harfield, Blaydon-on-Tyne
Hargreaves, Lloyd	... General Patternmaker	... ...	Arundel House, Victoria Embankment	London ...	Harfield, London
Harling & Todd	... Ironfounders, etc.	... ...	Gibbet Hill	Halifax	... ...
Harpers, Ltd.	... Makers of Accessories for the Transmission of Power	... ...	Rosegrove Ironworks	Burnley	... ...
Harrison Engine Co., Ltd., The	... Engineers and Steam Steering Gear Makers	... ...	... ...	Aberdeen	... Harpers, Aberdeen
Harrison & Hammond	... Engineers and Ironfounders	... ...	Ocean Works, Cross Lane	Manchester ...	Steering, Manchester
Hartley, Binns & Co.	... Engineers' Tool Makers	... ...	Vicarage Street	Iron Wakefield	Harrison & Hammond, Wakefield
Hartnell, Wilson	... Electrical Engineer	... ...	Works West End Tool Works	Halifax	... ...
Harvey, G. & A.	... Engineers, Millwrights, Machine Tool Manufacturers, & Factory Architects	... ...	Volt Works	Leeds ...	Hartnell, Leeds
Haswell, J. Stenson, & Co.	... Electrical and General Engineers	... ...	Albion Works, Woodville Street, Govan	Glasgow ...	Gandah, Glasgow
Hathorn, Davey & Co.	... Pumping Machinery for Mines and Water Works; Makers of Hydraulic Plant	... ...	Watling Street	Leicester	... ...
Hattersley, G., & Sons, Ltd.	... Loom Makers, and Makers of Weaving Machinery of every description	... ...	Sun Foundry	Leeds ...	Hathorn, Leeds
Hawthorns & Co., Ltd.	... Engineers, Shipbuilders and Forgemasters	... ...	North Brook Works	Keighley ...	Hattersley, Keighley
Hawthorn, R. & W., Leslie & Co., Ltd.	... Marine Engineers, Locomotive Builders and Shipbuilders	... ...	Leith Engine Works	Leith ...	Hawthorns, Leith
Haxby & Sewells	... Ironfounders	... ...	Granton Iron Works	Granton ...	Hawthorns, New-
Hayward Brothers & Eckstein, Ltd.	... Engineers and Ironfounders	... ...	St. Peter's ...	Newcastle-on-Tyne	castle-on-Tyne
Heald, John	... Engineer, Millwright, Ironfounder and India Rubber Machinist	... ...	Hebburn	... ...	Leslie, Hebburn
			... ...	Bowling Green Foundry, Well Lane	... ...
			... ...	187-193 Union St., Borough	London, S.E.
			Phoenix Foundry	... Chorley	Hayward Brothers, London
				... John Heald, Chorley	John Heald, Chorley

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TEL. GRAPHIC ADDRESS.	TEL. EPHONE NO.
Heap, William, & Co., Ltd. ...	Engineers' Tool Makers ...	Oldham Road Tool Works	Ashton under-Lyne	W. Heap, Ashton-under-Lyne	
Henderson, D. & W., & Co. ...	Marine Engineers and Shipbuilders, Engine, Boiler and Ship Repairers	Engine Shop—190 Elliot St. Shipyard, Graving Dock, & Slip Dock—Meadow-side, Partick	Glasgow	Finnieston, Glasgow Meddonside, Glasgow	3343 3029
Henderson, John M. ...	Engineer, Cranemaker, Contractors' Quarriers' and Stoneworkers' Machinery Maker	207 King Street and 104 West North St. (Goods)	Aberdeen	Cranes, Aberdeen ... A. B. C. (4th ed.) and Engineering Tel. Codes used.)	162
Henley's, W. T., Telegraph Works Co., Ltd.	Electrical Engineers, etc.	27 Martin's Lane, Cannon Street	London, E.C.	Henley's Works, London	734
Herbert, E. G. ...	Engineers' Tool Maker	Cornbrook Park Works, Manchester	Manchester	Heth, Manchester ...	230, 1365 and 1783
Hetherington, John, & Sons, Ltd. ...	Cotton, Wool and Silk Machinists and Heavy Tool Makers ...	Cornbrook Vulcan and Ancoats Works—Pollard Street Phoenix Works—Chapel Street	Manchester	... ... ... ...	383
Hick, Hargreaves & Co., Ltd. ...	Engineers, Boilermakers and Millwrights	Phoenix Works—Pollard Street Soho Iron Works, Crook Street	Bolton	Hick, Bolton ...	16
Higginbottom & Mannock ...	Crane and Hoist Makers ...	Crown Iron Works, Manchester	Manchester	Crown, Gorton Brook	1577
Hill, F. J. ...	Engineer, Gas Engine Expert ...	West Gorton	Leicester	... ... ... ...	543
Hind & Lund, Ltd. ...	Flour and Rice Mill Engineers, Grinding and Paint Mill Machinists	13 Bath Lane	Preston	Atlas, Preston ...	125
Hodge, Samuel, & Sons, Ltd. ...	Boilermakers, Engineers and Ship Repairers	Atlas Works, Edward St.	London, E.	Hodge, Millwall	London.
Hodges & Todd ...	Electrical Engineers ...	Union Ironworks, Millwall	London, N.W.	Ammeter, London	5115 Gerrard
Hodgson, H. E., & Co. ...	Engineers, Machine Tool Makers, and Makers of Wire Machinery	30-42 Hampstead Road	London	Cleckheaton ...	Hodgson, Brookhouse Cleckheaton
Holden & Brooke, Ltd. ...	Engineers and Injector Manufacturers	Brookhouse Works	... ...	Manchester ...	Influx, Manchester
Holdsworth & Sons ...	Boilermakers ...	Sirius Works, Heywood Street, West Gorton	Leeds Road	Bradford ...	Holdsworth, Boiler-makers, Bradford

Holiday, Read, & Sons, Ltd.	Electrical and General Engineers ...	... ... ...	Huddersfield	Huddersfield 115
Holmes, C. D., & Co.	Engineers, Boilermakers and Ship Repairers ...	Alfred Street	Hull ...	Compound, Hull ... 345
Holmes, J. H., & Co.	Manufacturing Electrical Engineers and Contractors ...	Portland Road	Newcastle-on-Tyne	Holmes, Newcastle-on-Tyne 1226, P.O. 278
Holroyd, Horsfield & Wilson, Ltd.	Engineers ...	17 Soho Square	London, W.	Vermillionette, London 269 Gerrard 25 Nat.
Holroyd, John, & Co., Ltd.	Tool Makers, Enginigers and Machinists ...	Examiner Buildings, Strut Street	Manchester ...	Compound, Manchester 4984
Holt, Thomas, Ltd.	Textile Machinists ...	27 Bothwell Street	Glasgow ...	Efficiency, Glasgow Larchfield Foundry, Leeds 4984
Hopkinson & Cope	Printers' Engineers, etc. ...	Larchfield Foundry	Leeds ...	Leeds 534
Horner, George	Flax Machine Maker, Engineer, Millwright and Ironfounder ...	Perseverance Works, Milnrow	Near Rochdale	Milnrow 206 Rochdale ...
Hosiery Machine Building Co., The, (Kiddier Brothers)	Hosiery and Lace Machine Builders	Atlas Iron Works, Molesworth Street	Rochdale ...	Atlas, Rochdale ... 122
Houston & Hamilton	Machine Makers, Brass and Iron founders ...	Albion Works, no3 Farrington Road	London, E.C.	Wharfedale, London 607 Holborn
Howden, James, & Co.	Engineers ...	Clonard Foundry	Belfast ...	Horner, Belfast ... 107
Hoyle, Elkanah, & Sons, Ltd.	Ironfounders, Millwrights and Machine Makers ...	Bell Street Works	Nottingham	Machine, Nottingham 143
Hoyle & Preston	Machine Makers ...	Belfast Foundry ...	Belfast	Belfast Foundry, Belfast 550
Hudson, Hall & Griffith (late W. Hudson & Co.)	Machine Tool Makers ...	195 Scotland Street	Glasgow	Howden, Glasgow ... 1467
Hudswell, Clarke & Co.	Locomotive Engine Makers ...	Waterside Works	Halifax	Elkanah, Halifax ... 183
Hulse & Co., Ltd.	Machine Tool Makers ...	Globe Works ...	Keighley	Combs, Keighley ... 30
Humber & Co., Ltd.	Cycle Manufacturers ...	Dalton Tool Works, Fleece Street	Keighley	Hudson, Toolmakers, Keighley 126
		Railway Foundry	Leeds	Loco, Leeds ... 504
		Ordsall Works, Regent Bridge, Salford	Manchester	Eshuh, Manchester ... 1427
		Beeston ...	Nottingham	Humber, Beestor, ... 1222

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Humber, Syner & Co., Ltd.	Cycle Manufacturers ...	... Crocus Street	Nottingham	Humber, Crocus St., Nottingham	765
Humphrys, Tennant & Co. ...	Marine Engineers ...	Deptford Pier	London, S.E.	Humphrys, London	27 Deptford
Hunslet Engine Company, The	Engineers and Locomotive Builders	Hunslet Engine Works ...	Leeds	Engine, Leeds	528
Hunter & English ...	Engineers, Millwrights, Iron and Brass Founders	202 Bow Road, Bow	London, E.	Venator, London	6045 Stratford
Hutchinson, Hollingworth & Co., Ltd.	Loom Makers ... Woollen and Worsted Preparing Machinery	Dobcross Loom Works, ... Atlas Works, Colne Road	Dobcross Huddersfield	Foundry, Dobcross ... Atlas, Huddersfield	1710 143
Ince Forge Co.	Iron and Steel Forgings	Ince Forge	Wigan	Forgings, Wigan	47
Inglis, A. & J. ...	Marine Engineers and Shipbuilders, Engine, Boiler and Ship Repairs	Engine Shop—64 War-roch Street —Porthouse	Glasgow Ship Dock	Inglis, Glasgow	1328
Jackson & Brother ...	Engineers, Millwrights, Boiler-makers, Iron and Brass Founders, Bleachers' and Dyers' Machinists	Wharf Foundry	Bolton	Jackson, Bolton	34
Jackson, P. R., & Co., Ltd.	Engineers (Electrical and Mechanical), Steel and Iron Founders, Makers of Dynamos and Motors	Salford Rolling Mills, Salford	Manchester	Jackson's, Manchester	623
Jardine, John ...	Lace Machine Builder ...	Deering Street Works	Nottingham	Jardine, Nottingham	295
Jefferson, Joseph, & Brothers	Machine Makers, Iron and Brass Founders	Brown Royd Works, Thornton Road	Bradford	... ...	518

Coppersmiths, etc. Jessop & Appleby Brothers (Leicester and London), Ltd.	General Engineers ...	... St. Margarets ...	... Leicester ...	Jessop, Leicester ...	73
Jessop, Wm., & Sons, Ltd.	Steel Manufacturers ...	... Brightside Works	... Sheffield ...	Jessops, Sheffield ...	152 and 2076
Johnson & Phillips ...	Electrical, Telegraphic and Hydralic Engineers	Victoria Works ...	... Old Charlton	Juno, London ...	1010 Avenue 23 Woolwich
Johnson, Thomas, & Co. ...	Ship Joiners, Shipwrights, Saw Millers, Timber Merchants, and Builders of Insulated Chambers	Gun Lane Saw Mills, Limehouse	... London, E. ...	Buxus, London ...	162 Eastern
Johnson, William, & Sons ...	Brick Grinding and Milling Machinery Manufacturers	Castleton Foundry	... Leeds ...	Ronksley, Armley ...	387
Johnston, R., & Co., Ltd.	Brassfounders ...	... 28 Little Alice Street	... London, E. ...	Steamship, Liverpool	198 and 199
Jones, John, & Sons ...	Shipbuilders, Marine and Hydraulic Engineers, Boilermakers, Forge and Founders	Cotton Street ...	... Liverpool ...	Steamship, Liverpool	198 and 199
Jopling, E., & Sons ...	Iron and Steel Founders ...	Dunning Street Foundry	Sunderland ...	Castings, Sunderland	352 Nat.
Keighley Electrical Engineering Co., Ltd., The		Electrical Engineers ...	... Alexandra Works,	Keighley ...	113
Keighley Engineering Co. ...	Engineers, Lathe and Machine Tool Makers	Waddington Street	... Keighley ...	Engineering, Keighley ...	
Keighley, George ...	... Looms, Winding, Warping and Sizing Machine Maker	Bank House Ironworks, Woodfield	... Burnley ...	Engineering, Keighley ...	172 and 172A
Kendall & Gent ...	Machine Tool Makers ...	Victoria Works, Belle Vue	Manchester ...	Tools, Manchester ...	5147
Kendall, G. H., & Co. ...	Brassfounders and Enginccrs ...	... ... ...	... ...	Huddersfield	
Kenworthy, Royston & Co. ...	Machinists ...	East Parade	... ...	Huddersfield	
Kenworthy, Taylor & Co. ...	Engineers, Iron and Brass Founders	Barnsley Foundry	... ...	Barnsley ...	184
				Taylor ...	

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Kerr, Stuart & Co. ...	Engineers and Ironfounders...	... California Works Head Office—20 Bucklersbury Mansion House Bell Street Works ...	Stoke-on-Trent London, E.C.	California, Stoke-on-Trent	2013
Kiddier Brothers (The Hosiery Machine Building Co.)	Hosiery and Lace Machine Builders		Nottingham ...	Machine, Nottingham	143
Kiddier, J., & Son ...	Hosiery Machinists ...	Globe Works, Waterway Street	Nottingham ...	Kiddier, Nottingham	252
Kilburn, R., & Sons ...	Ironfounders and Machine Makers...	Perseverance Works, Elland Road	Leeds ...	... ... ...	1237
Kincaid, John G., & Co. ...	Marine Engineers, Boilmakers, Smiths, Ironfounders, and Ship Repairers	East Hamilton Street ...	Greenock ...	Kincaid, Greenock ...	95
Kirby Banks Screw Co., Ltd.	Bolt and Screw Manufacturers ...	Albert Screw Works, Meadow Lane	Leeds ...	Hexagon, Leeds ...	541.
Kirkaldy, John, Ltd. ...	Makers of Marine Auxiliary Machinery	101 Leadenhall Street ... Works—Nettleswell Cross	London Essex ...	Compactum, London ...	
Kirkham, J. & W. ...	Brassfounders ...	Lark Street Brassworks ...	Bolton ...	Kirkaldy's Works Nettleswell Cross ...	96
Kirkstall Forge Co. ...	Iron and Steel Manufacturers ...	Kirkstall Forge ...	Near L.ceds ...	Brass, Bolton ...	
Kitson & Co. ...	Locomotive and General Engineers	Airedale Foundry ...	Leeds ...	Forge, Kirkstall ...	147
Kitson J., & Sons, Ltd. ...	Engineers ...	Valley Works, Valley Road, and Canal Road	Bradford ...	Airedale, Leeds ...	511
Laird Brothers ...	Shipbuilders, Engineers and Boiler-makers	Birkenhead Ironworks ...	Birkenhead ...	Laird, Birkenhead ...	3
Lambeth Brass and Iron Co., Ltd., The ...	Hydraulic, Sanitary and Gas Engineers, Brassfounders, etc.	Short Street, Lambeth ...	London, S.E.	Diaphragm, London ...	796 Hop

Lang, John, & Sons ...	Tool Makers ...	... / ...	Mary Street	... ...	Todleben Ironworks, Cross Lane, Salford 80 St. John Street	... ...	Johnstone ...	Lang, Johnstone	... ...	Hirstons, Manchester	559
Larmuth, Thomas, & Co. ...	Engineers ...	... ...	Brassfounder ...	... ...	Flax, Tow, Hemp and Jute Machine Manufacturers, and Engineers Woollen and Asbestos Machinists ...	... ...	Hope Foundry ...	Leeds...	Manchester ...	Hirnant, Manchester	956
Lawson, J. ...	Engineers ...	... ...	Lawson, S., & Sons ...	... ...	Victoria Works, Water St.	... ...	Rochdale ...	Leach, Water Street, Rochdale	... ...	Leach, Water Street, Rochdale	101
Leach & Co. ...	Engineers ...	... ...	Edward, T., & Co. ...	... ...	35 Queen Victoria Street 28 Deansgate ...	... ...	London, E.C.	Preference, London	... ...	5490 Bank	5490
Lee, Croll & Co. ...	Ironfounders, Engineers and Machine Makers ...	... ...	Leeds Engineering and Hydraulic Co., The	... ...	Lawside Foundry, Lochie Machine Makers and Hydraulic Engineers ...	... ...	Manchester ...	Vacuum, Manchester	... ...	3857	3857
Leeds Forge Co., Ltd. ...	Steel Manufacturers, Makers of Furnaces for Marine and Land Boilers, Pressed Steel Under Frames, and Bogies for Railway Rolling Stock	... ...	Millwrights, Engineers and Machine Makers	... ...	Hope Works, Kirkstall Road	... ...	Leeds...	Vulpes, Leeds	... ...	882	882
Leeds Machinery Stores Co., Ltd., The (Rawlinsons, Ltd.)	Millwrights, Engineers, Boilermakers and Shipbuilders	... ...	Lees, Anderson & Co. ...	... ...	100 Clyde St., Anderston	... ...	Glasgow	Leeds, Glasgow	... ...	Machinery Stores, Leeds	1487
Lees, Asa, & Co., Ltd. ...	Machinists (Textile) ...	... ...	Lester & Perkins ...	... ...	Soho Ironworks ...	... ...	Oldham	Asa, Oldham	... ...	Lees, Glasgow	3088
Lewis, John, & Sons ...	Ship Repairers ...	... ...	Lewis Burnet & Co. ...	... ...	11 London Street and Royal Albert Docks	... ...	London, E.	Outwork, London	... ...	539 Albert Dk	539
'Little John' Cycle Co., Ltd. ...	Engineers and Boilermakers (See <i>Burnet, Lindsay, & Co.</i>)	... ...	Cycle Manufacturers ...	... ...	Palmerston Road	... ...	Aberdeen	... ...	... ...	5197 Eastern	642
Livesey, Henry, Ltd. ...	Makers of Looms, Winding, Warp- ing and Sizing Machines	... ...			Holland Street, Hyson Greenbank Ironworks ...	... ...	Nottingham	Thorough,	Nottingham	Livesey, Blackburn	1534
							Blackburn	... ...	... Livesey, Blackburn	215	

NAMF.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Lloyd Hargreaves	... <i>(See Hargreaves, Lloyd.)</i>				
Lobnitz & Co., Ltd.	... Marine Engineers, Ship and Dredger Builders	Engine Works—53 Anderson Quay Boiler Works—172 Lancefield St.	Glasgow	Lobnitz, Renfrew ...	4
London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., The	Marine Engineers, Shipbuilders, Boilmakers and Brassfounders	Middleton Shipyards, Govan	Middleton, Glasgow	665	665
London Graving Dock Co., Ltd.	Ship and Engine Repairers ...	114 Fenchurch Street and West India Dock	London, E.C.	Augmented, London	12101 Avenue
Loudon Brothers	Engineers' Machine Tool Makers ...	Clyde Engineering Works Office—46 Waterloo Street	Johnstone	Loudon Brothers, Johnstone	26
Low, James F., & Co.	Machine Makers, Iron and Brass Founders	Monifieth Foundry,	Glasgow	Achilles, Glasgow ...	553
Luke & Spencer, Ltd.	Manufacturers of Grinding and Polishing Machinery, Wheels, etc.	Monifieth Broadheath	Near Dundee	... ... ...	I Monifieth
Lytham Shipbuilding Co.	Shipbuilders and Engineers ...	Emery	Near Manchester	Emery, Broadheath	49 Altrincham
				Sternwheel, Lytham	59
M'Dowall, John, & Sons	Saw Mill and General Engineers ...	Walkinshaw Street	Johnstone	Macdowall, Johnstone	
M'Gee, Walter, & Son	Engineers and Machinists ...	Albion Works	Paisley	Albion, Paisley	137
Macgregor Cycle and Engineering Co., Ltd.	Cycle Manufacturers ...	Aspley Lane	Nottingham	Macgregor, Nottingham	845
M'Kie & Baxter	Engineers, Shipbuilders and Boiler-makers	Copland Works, Govan	Glasgow	Calidad, Glasgow	1891

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Marsden, Samuel, & Son, Ltd.	Bolt and Nut Manufacturers and Makers of Machines for making and finishing the same; also Oil Fuel Furnaces for heating Iron or Steel.	London Road ...	Manchester ...	Bolts, Manchester ...	336 and 606
Marshall, Fleming & Jack ...	Engineers and Cranemakers ..	Dellburn Works ...	Motherwell ...	Dellburn, Motherwell	
Marshall, Sons & Co., Ltd...	General Engineers ...	Britannia Works and Trent Works ...	Gainsborough	Marshalls, Gainsborough	10
Mason, John ...	Textile Machinist ...	Globe Works ...	Rochdale ...	Masons, Rochdale ..	48
Masson, Scott & Co., Ltd...	Engineers and Millwrights ...	York Place, New Wards-worth	London, S.W.	Massion, London...	28 Battersea
Mather, Alex., & Son ...	Engineers and Founders ...	Orwell Works, Dalry Road	Edinburgh ..	Mather, Edinburgh	62 West
Matthews, William, & Co. ...	Artesian Well Engineers and Pump Makers	Brookside Works, Queen's Road, Miles Platting	Manchester ...	Matthews, Harpurhey	
Maud & Turner ...	Engineers and Machine Tool Makers	Perseverance Works, Gibet Street	Halifax ..	Maud Turner, Halifax	67
Maudslay, Sons & Field, Ltd.	Marine and General Engineers and Boilermakers	110 Westminster Bridge Road	London, S.E.	Maudslays, London	681 Hop.
Mavor & Coulson, Ltd.	Engineers and Electricians and Dynamo Makers	47 King St., Mile-End ...	Glasgow ...	Prodigious, Glasgow	1369
Mayes, John ...	Brassfounder, Wheel Cutter, Machinist, and Model Maker	Red Lion St., Clerkenwell	London		
Meadowcroft, C. H., & Brother	Brassfounders and Finishers ..	Church Street ...	Dukinfield ..	Meadowcroft Brothers	213 Ashton
Mechan & Sons	Engineers ...	Scotstoun Ironworks ...	Glasgow ...	Dukinfield	
Meldrum Brothers	Engineers ...	Atlantic Works, City Rd., and Branches	Manchester ...	Nautical, Glasgow ...	871
Mellor, Moses, & Sons, Ltd.	Hosiery Machinists ...			Meldrum, Manchester	2437
				Meldrum, London	1674
				Meldrum, Leeds	5964 Avenue.
				Cronul, Newcastle-on-Tyne	1391
				Meldrum, Paris	1461
				Mellor, Nottingham	
				Lee Works, Arkwright Street	113

Mercer, Hollinwood	Mercer, Hollinwood	Near Manchester	Hydraulic, Leeds ...	214
Middleton, Robert	Tool and Bright Nut and Bolt Maker makers	Hollins Ironworks, Hollinwood Sheepscar Foundry	Leeds ...	597 Hop.
Middleton, Thomas, & Co.	Hydraulic and General Engineer, Iron and Brass Founder Engineers' Millwrights, Printing and Brickmaking Machine Makers and Ironfounders	Loman Street	London, S.E.	597 Hop.
Midgley & Sutcliffe	Engineers and Machine Tool Makers	West End Toolworks, Richmond Road 65 Nicolson Street	Bradford Edinburgh	1680
Miller & Richard,	Printing Engineers	... ... ...	... ...	656
Mills, John	Engineer	... ... ...	Oldham	
Milne, James, & Son, Ltd.	Engineers and Brassfounders	Milton House Works, Abbeyhill Millfield Foundry	Edinburgh Belfast	792
Moore, James, & Sons, Ltd.	Ironfounders	... ... ...	... ...	466
Moore & Korte	Makers of Friction Clutches, Colliery Appliances and Pumps Anchor and Shipsmiths, Engineers, etc.	36 Victoria Road, Holbeck	Leeds	1573
Moore, W. & E.	25 High Street, Poplar ...	London, E.	Korte, Leeds	Employment, London
Moorhouse, Sydney, & Co.	Brassfounders	Victoria Brass and Iron Works	Stalybridge	248 Eastern & Shipping Exchange, London.
Moorhouse, Walter, & Co.	Brassfounders	Cocker Hill Works	Stalybridge	51
Moreland, Richard, & Son, Ltd.	Engineers	3 Old Street	London, E.C.	Cockerel, Stalybridge Expansion, London
Morley, Y. H. (late Scarr & Morley)	Ironfounder	Dean Clough Foundry	Halifax	784 Holborn
Morris, J., & Co.	Brassfounders	27 and 29 Lancaster St., Borough Road	London, S.E.	Funderia, London
Morrison, W., & Sons	Engineers and Millwrights, also Paper Machine Wire Cloth Manufacturers	Jane Street	Leith ..	40 and 99 Morrison, Jane Street, Leith

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Morton & Edwards	Brassfounders ...	Hollins Street Works ...	Stalybridge		
Morton, S. & H., & Co.	Engineers, Boilermakers and Iron Shipbuilders	Victoria Dock ...	Leith ...	Morton, Leith	4047
Mudd, W. R., & Co.	Engineers and Machinists ...	Beatrice Road ...	Leicester ...	Mudd, Leicester	349
Mui. & Houston, Ltd.	Marine Engineers and Boilermakers	33 Portman Street ...	Glasgow	Beatitude, Glasgow	1553
Muir, William, & Co., Ltd.	Machine Tool Makers ...	Sherbourne Street ...	Manchester ..	Britannia, Manchester	529
Murdoch & Murray	Shipbuilders ...	... ... ...	Port-Glasgow	Murdoch Murray, Port-Glasgow	32
Musgrave Brothers	Hydraulic and General Engineers ...	Crown Point Foundry, East Street	Leeds	Musgrave, East Street	1226
Musgrave, John, & Son, Ltd.	Engineers, Boilermakers and Millwrights	Globe Ironworks, Kay Street	Bolton	Musgrave, Bolton ..	67
Napier Brothers, Ltd.	Engineers ...	100 Hydepark Street ...	Glasgow	Windlass, Glasgow	714
Napier, R., & Sons, Ltd.	Marine Engineers, Shipbuilders, Engine, Boiler and Ship Repairs	Engine and Boiler Works — Lancefield Street	Glasgow	Napier, Glasgow	3363
Nasmyth, Wilson & Co., Ltd.	Locomotive, Hydraulic and General Engineers, Gas Engine Makers ...	Shipyard—Govan Bridgewater Foundry, Patricroft Wellington Road...	Near ...	Nasmyth, Patricroft National, Ashton-under-Lyne	1603
National Gas Engine Co., The, Ltd.			... Manchester Ashton-under-Lyne	... ... ...	5 Eccles
Needham Brothers & Brown	Engineers, Iron and Brass Founders	Borough Foundry, Pontefract Road	Barnsley	... ... ...	43
New Found Cycle Components Co.	Cycle Fittings Manufacturers ..	Beatrice Road ...	Leicester	Component, Leicester	24
					349

Newton's Electrical Works, Ltd.	Manufacturing Electrical Engineers	Road, Herbert Street	... Taunton ... Arc, Taunton	9 Nat.
Moble & Lund	Tool Makers	... Northern Machine Tool Works	Felling-on-Tyne London, E. ... Lathes, Felling-on-Tyne Normandy, London	11023
Jormandy's Patent Marine Aerated Fresh Water Co., Ltd.	Engineers and Ironfounders	... Phillip Street, Victoria Dock Road	... Wallsend-on-Tyne ... News, Wallsend ... News, Wallsend ... News, Sunderland ...	104 P.O. 105 P.O. 10 Nat. 37 Nat. 10 P.O. 12 P.O. 130 Nat.
North-Eastern Marine Engineering Co., Ltd.	Marine Engine Builders, Boiler-makers Iron and Brass Founders Makers of Heavy Iron and Steel Forgings, etc.	Northumberland Engine Works Northumberland Forge South Dock	Wallsend-on-Tyne ... Sunderland ...	1578
Nottingham Engineering Co., Ltd.	Marine Engine Builders, Boiler-makers Iron and Brass Founders, and Makers of Heavy Iron and Steel Forgings Engineers, Millwrights and Tool Makers	... Canterbury Rd., Radford	Nottingham ... Iron, Nottingham	.
Oldham, Alexander, & Sons Oldham Boiler Works Co., Ltd.	Engineers, Machinists and Piston Makers	Johnson Brook Works Oldham Edge Iron Works	Piston Oldham ... Dukinfield ... Weldless, Dukinfield	8 Hyde
Oldham & Son	Boilermakers	... ... ...	... Oldham ... Boilers, Oldham	16
Oldroyd, Edwin, & Co., Ltd.	Engineers and Piston Makers	... ... ...	Steel Coil Piston Works, Denton Crown Works ...	235
Orient Steam Navigation Co., The	Heating, Ventilating, Hydraulic, Mechanical and Electrical Engineers	... ... ...	Near Manchester ... Leeds ...	241
			13 Fenchurch Avenue ...	Orient, London

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Osborn, Samuel, & Co. ...	Steel Manufacturers ...	Clyde Steel and Iron Works, Vulcan Ironworks ...	Sheffield	Osborn, Sheffield ...	409 and 2039
Owen, Brazil & Holborow ...	Steam Engine and Pump Makers	Vulcan Ironworks ...	Bristol	Hydraulic, Bristol ...	846
Oxley Brothers, Ltd. ...	Ironfounders and Engineers...	Mowbray Street ...	Sheffield	... ... ...	1087
Oxley, George, & Sons ...	Ironfounders and Engineers	Vulcan Foundry, Attercliffe Road	Sheffield	... ... ...	1200
 Palmer's Shipbuilding and Iron Co., Ltd.	Shipbuilders and Engineers ...	...	...	Jarrow-on-Tyne	148 P.O. 149 P.O. 2765 Nat.
Parker, Charles, Sons & Co. ...	Engineers, Machine Makers and Ironfounders	Victoria Foundry ...	Dundee	Parker, Dundee ...	408
Parker, Thomas, Ltd. ...	Electrical Engineers ...	Wednesday Road ...	Wolverhampt'n	Coils, Wolverhampton ...	34
Parkinson, J. ...	Machine Tool Maker ...	Canal Ironworks ...	Shipley	Temples, Shipley ...	40 and 80
Parsons, C. A., & Co. ...	Electrical Engineers, Electric Lighting Plant, Electric Motors and Steam Turbine Makers	Heaton Works ...	Newcastle-on-Tyne	Turbo, Newcastle-on-Tyne	1618 Nat. 2 Byker G.P.O.
Payne & Sons ...	Printers' Engineers ...	Atlas Works ...	Otley	Wharfedale, Otley	...
Pearn, Frank, & Co., Ltd. ...	Hydraulic Engineers and Steam Pump Makers	Thomas Street, Gorton	West Manchester	Pumps, Manchester	1021
Pearson & Bennion, Ltd. ...	Engineers and Machinists ...	Union Works, Belgrave Road	Leicester	Prominent, Leicester	103
Pease, Rhodes & Co., Ltd. ...	Engineers, Brassfounders and Coppersmiths	and Offices, Showrooms, and Brass Works—19 Little Horton Lane	Bradford	Stanchion, Bradford	123 398 398A
		Holte's Yard			

Pegg, Samuel, & Son	Engineers and Ironfounders	... Alexander Street ...	Leicester	... Pegg, Ironfounder ...	104
Pemberton & Co.	Loom Makers	... Waterloo Iron Works, Trafalgar Street	Burnley	... Pembertons, Machinists	113
Penn, John, & Son, Ltd.	Engineers	... Greenwich	London, S.E.	...	
Perkin & Co., Ltd.	Engineers	... Junction Engine Works, Whitehall Road	Leeds	... Shafting, Leeds	231
Perkin, John, Jun., Ltd.	Wool Washing and Drying Machines, General Repair Work, Ironfounders, etc.	... River Street Ironworks	Rochdale	... Petrie, Jun., Rochdale	37A
Phoenix Dynamo Manufacturing Co.	Electrical Engineers	... Hubert Street, Leeds	Bradford	... Dynamo, Bradford...	952
Phosphor Bronze Co., Ltd.	Brassfounders, Makers of Metallic Alloys & Metal Rollers and Drawers	... 87 Summer Street	London, S.E.	Phosphor Bronze, London	4557 Hop.
Pickering's, Ltd.	Lift, Crane and Elevator Builders, Hydraulic and General Engineers	Globe Elevator Works	Stockton-on-Tees	Pickering's, Stockton-on-Tees	4544 Nat.
Pickup & Kelly	Ironfounders, Engineers and Paper Stainers' Machinists	Atlas Road Foundry	Darwen	...	
Pilling, John, & Sons, Ltd.	Loom Makers, Iron & Brass Founders	Primet Foundry ...	Colne	Pillingsons, Colne	
Platt Brothers & Co., Ltd.	Makers of Textile Machinery	Hartford Works ...	Oldham	... Platts, Oldham	26
Pool, L., & Son	Bolt, Nut and Screw Manufacturers	Lion Screw & Bolt Works, Sweet Street	Leeds	... ... ...	501
Pope, W., & Son, Ltd.	Gas and General Engineers	Broad Street House	London, E.C.	Irradiating, London	
Potter, W. H., & Sons	Shipbuilders and Engineers	Gotha Works	Slough	Gotha, Slough	
Pratt, F., & Co., Ltd.	Machine Tool Makers	Queen's Dock	Liverpool	... Liverpool	
Prince Smith & Son	(See Smith, Prince, & Son)	Eagle Ironworks, Victoria Street, East	Halifax	... Seahorse, Liverpool	
Proctor, Jonas	Roller, Ring, Spindle, Spindle and Flyer and Tool Maker	Moses Gate Machine Works	Near Bolton	... Pratt, Halifax	
Pullan & Mann	Brick, Tile and Sanitary Pipe Machinery Engineers, etc.	Elland Road	Leeds	... Spindles, Bolton	421
				... Cambrian, Leeds	1232

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Pulsometer Engineering Co., The, Ltd.	Pump and Refrigerating Machinery Makers	9 Elms Ironworks, Hayle Foundry Wharf 61 & 63 Queen Victoria St. 1 East Parade ... 76 Oldhall Street ... 8 York Street ...	London, S.W. London, E.C. Leeds ... Liverpool ... Glasgow ...	Pulsometer, London Pulsometer, Leeds Pulsometer, Liverpool Pulsometer, Glasgow	872 Bank 1925 228 5219
Qualter, Hall & Co. ...	Engineers and Ironfounders	... Railway Foundry	... Barnsley	Qualter Hall, Barnsley	17 Nat.
Rait & Gardiner ...	Engineers and Ship Repairers	... Offices — 155 Fenchurch Street	London, E.C.	Repairs, London	4991 Avenue
Raleigh Cycle Co., Ltd.	Cycle Manufacturers ...	... Dry Docks and Works at Millwall Docks, and at Cubitt Town Works, adjoining Dry Docks at Royal Albert Docks and Tilbury Docks	London, E.C.	Raleigh, Nottingham	232
Ramage & Ferguson, Ltd.	Engineers and Shipbuilders	... West Pier Docks...	Leith ...	Ramage, Leith	548
Ramsden Brothers ...	Worsted Machine Makers ...	... Market Street Works	Keighley ...	Ramsden Brothers, Keighley	7239
Ranger & Hooper ...	Brassfounders ...	... 36 Percival Street, Goswell Road	London, E.C.	Eagle, Greenock	...
Rankin & Blackmore ...	Marine Engineers, Ironfounders, and Boilermakers	... Eagle Foundry ...	Greenock ...	Eagle, Greenock	8
Ratchiff, J., & Sons ...	Machinists, Iron and Brass Founders	... Wortley ...	Leeds ...	Leeds ...	...

Readhead, John, & Sons (See Holliday, Read, & Sons, Ltd.)	Marine Engineers, Shipbuilders, Engine, Boiler, Ship Repairers and Dry Dock Proprietors	Forge Masters ... Machine Tool Makers ... Engineers and Boilermakers, etc. ... Millwrights, Engineers, Steam Steering Gear, Windlass and Capstan Makers	West Docks ... Parkinson Lane ... LeaCut Ironworks, Church Row, Limehouse Thread Street ... Brassfounders and Finishers ... Engineers and Shipbuilders ... Marine Engineers and Shipbuilders	South Shields ... Halifax ... London, E. Paisley ... London, S.E. London, S.E.	Readhead, South Shields ... Redmans, Engineers, Halifax Reid, Paisley ..	14 G.P.O. 24 Nat. 115 Nat. (Dry Dock)
Read Holliday & Sons, Ltd.	Reay & Usher ...	Forge Masters ... Machine Tool Makers ... Engineers and Boilermakers, etc. ... Millwrights, Engineers, Steam Steering Gear, Windlass and Capstan Makers	South Hylton ... Parkinson Lane ... LeaCut Ironworks, Church Row, Limehouse Thread Street ... Brassfounders and Finishers ... Engineers and Shipbuilders ... Marine Engineers and Shipbuilders	Sunderland ... Halifax ... London, E. Paisley ... London, S.E. London, S.E.	Reay, Hylton Redmans, Engineers, Halifax Reid, Paisley ..	308
Redman, C., & Sons	Redpath & Paris	Engineers and Boilermakers, etc. ... Millwrights, Engineers, Steam Steering Gear, Windlass and Capstan Makers	LeaCut Ironworks, Church Row, Limehouse Thread Street ... Brassfounders and Finishers ... Engineers and Shipbuilders ... Textile Machine Makers, Millwrights and Engineers	Paisley ... London, S.E.	Paisley ..	2078 Nat.
Reid, Thomas, & Sons	Remington, T. W., & Co.	Brassfounders and Finishers ... Engineers and Shipbuilders ... Marine Engineers and Shipbuilders	19 and 20 Tower Street, Thames Street, Greenwich	London, S.E.	Probate, London ..	8050 Deptford
Rennie, G., & Co.	Rennoldson, J. P., & Sons	Textile Machine Makers, Millwrights and Engineers	Wapping Street and Shadwell Street	South Shields ... Belfast ...	Rennoldson, South Shields ... Machinery, Belfast ...	11 P.O. 473
Reynolds, James, & Co.	Rhodes, J., & Sons	Machine Makers ... Hydraulic Engineers ... Marine and Electrical Engineers ...	Linfield Foundry, Grosvenor Street Grove Ironworks ... Neville Works, Elland Road Hartlepool Engine Works	Belfast ... Wakefield ... Leeds... Hartlepool	Rhodes, Wakefield Press, Leeds .. Richardsons, Hartlepool ..	2078 Nat.
Rice & Co.	Richardson, Thomas, & Sons, Ltd.	Hydraulic Engineers ... Marine and Electrical Engineers ...	Hartlepool Engine Works	Hartlepool	Richardsons, Hartlepool ..	5 P.O. 4247 Nat.
Richardson, Tuer & Co.	Richardson, Wigham, & Co.	Ironfounders and Cotton Machinists	Hope Foundry, Farnworth	Manchester ..	Richardson,	
Richardson, Wigham, & Co.	Richards, W., & Son...	Engine, Boiler and Shipbuilders	Neptune Works, Walker	Nr. Newcastle-on-Tyne	Mosesgate	
Richards, W., & Son...	Richmond & Chandler, Ltd.	Constructional Ironwork and Founders	Phoenix Ironworks	Leicester ..	Neptune, Newcastle- on-Tyne	401 P.O.
Richmond & Chandler, Ltd.	Agricultural Engineers	Agricultural Engineers	Strangeways ...	Manchester ..	Richards, Leicester ..	11,909 Nat.
						1698

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Richmond, Joseph, & Co., Ltd.	Engineers ...	... 30 Kirby Street, Hatton Garden	London, E.C.	Richmond, London	822 Holborn
Frey, J. F. ...	Engineer, Millwright and Machine Maker	Marino Mills, Moldgreen	Huddersfield	...	284
Frey, J. H., & Co. ...	Engineers, Bleaching, Dyeing and Finishing Plant Makers	Elton Ironworks ...	Bury ...	Riley, Bury ...	59
Mackie, Hart & Co., Ltd.	Engineers, Iron and Brass Founders	Mountpottinger Road ...	Belfast	Ritchie Hart, Belfast	145
Peterson, A. W., & Co.	Engineers, Shipbuilders and Ship Repairers	Royal Albert Dry Dock, Albert Docks	London, E.	Trunnon, London	538 Albert Dock
Peterson & Orchard, Ltd.	Engineers, Millwrights, Machine Makers and Founders	Wallace Foundry ...	Dundee	Founders, Dundee	398
Robin Hood Cycle Co., Ltd	Cycle Manufacturers ...	Newdigate Street ...	Nottingham ...	Enterprise, Nottingham	126
Johnson & Dodd ...	Engineers ...	Bridge Road Works, Garrow Street, Poplar	London, E. ...	Ferrarius, London ...	5063 Eastern
Johnson, J. H. ...	Brassfounder ...	91 Globe Road ...	London, E.	...	
Johnson, Joseph, & Co.	Engineers, Ironfounders and Machinists ...	Springfield Ironworks, Salford	Manchester ...	Opal, Manchester ...	783
Johnson, William, & Son ...	Machinists ...	High Lee Mill ...	Oldham ...	Machinery, Oldham	198
Rodger, A., & Co. ...	Shipbuilders and Ship Repairers ...	Dock Shipbuilding Yard	Port-Glasgow	Rodger, Port-Glasgow	7
Roger Bolton & Son ...	(See Bolton, Rodger, & Son.)				
Roger, R., & Co. ...	Engineers, Iron and Brass Founders, Coppersmiths, Makers of Steam Winches, Cranes, etc.	Stockton Iron Foundry, West Row	Stockton-on-Tees	Roger, Stockton-on-Tees	19 P.O. 450 Nat.
Rogerson, John, & Co., Ltd. ...	Steel Founders, Forgemasters and Engineers	Stanners Closes Steel Works	Wolsingham, R.S.O.,(Co. Durham) Hull ...	Steelworks, Wolsingham	58 Nat.
Se. Downs & Thompson, Ltd.	Engineers and Boilermakers	Old Foundry ...	...	Rose, Hull ...	...
Sisling & Appleby ...	Electrical Engineers ...			Bradford ...	344
				Trafalgar Street ...	844

Rowan, David, & Son	Marine Engineers and Boilermakers	... 231 Elliot Street ...	... Glasgow	... Rowan, Glasgow ...	1316
Royce, F. H., & Co., Ltd.	Manufacturing Electricians ...	... Cooke Street, Hulme	... Manchester	Switch, Manchester	772 and 3562
Russell & Co. ...	Shipbuilders and Steel Spar Makers	Kingston Shipbuilding Yard	Port-Glasgow	Russell, Port-Glasgow	3335 Glasgow II Port-Glasgow 4
Russell, George, & Co.	Engineers and Cranemakers	Alpha Works ...	Motherwell ...	Russell, Motherwell	
Russell, S., & Sons ...	Ironfounders ...	Bath Foundry, Bath Lane	Leicester	... ... ...	115
Ryder, Thomas, & Son	Forging Machines, Engineers' Tool Makers, Roller Makers for Cotton Machinery, etc.	Turner Bridge Ironworks, Tonge;	Bolton	Ryder, Machinists, Tonge, Bolton	206
Ryder, T., & Co.	Brewers' Engineers, Coppersmiths, etc.	Knott Mill ...	Manchester	Lecomber, Manchester	1789
Ryder, William	Machinist, Tool Maker, Roller Spindle and Flyer Maker, Ring and Spindle Maker for Cotton Machinery	Bee Hive Works, Folds Road	Bolton	Beehive, Bolton	55
St. George's Ironworks, Ltd.	Engineers, Ironfounders, Millwrights, Wheel and Pulley Makers	Hulme Hall Road	... Manchester	Ormerod, Grierson, Manchester	229
St. Pancras Ironworks Co., Ltd.	Engineers, Ironfounders and Contractors	171, 173 St. Pancras Road	London, N.W.	Equitation, London	519 King's Cross
Sagar, J., & Co.	Wood Working Machinery Manufacturers, Saw Mill Machinery Makers	Canal Works ...	Halifax	Sawtooth, Halifax ...	136
Sawyer, W., & Son ...	Brassfounders ...	51 to 53 Mount Pleasant, Clerkenwell	London, E.C.		
Saxon, George ...	Engineer and Millwright ...	Openshaw Engineering Works	Manchester	Saxons, Openshaw ...	959
Schofield & Taylor	Engineers and Millwrights ...	Perseverance Ironworks, Turnbridge	Huddersfield	... ... ...	120
Scholefield, R. ...	Brick Machine Maker ...	Kirkstall Road ...	Leeds	Brick, Leeds	
Scott Brothers ...	Machine Tool Makers ...	West Mount Ironworks ...	Halifax	Scott, Halifax	116

NAME.	NATURE OF BUSINESS,	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
				432 P.O. 1259 Nat.	
Scott & Co. ...	Shipbuilders and Engineers ...	Cartsdyke ...	Greenock ...	Scott, Greenock ...	113
Scott, Ernest, & Mountain, Ltd. ...	Electrical and General Engineers, Iron and Brass Founders	Close Works ...	Newcastle-on-Tyne	Esco, Newcastle-on-Tyne	432 P.O. 1259 Nat.
Scott & Hodgson ...	Engineers ...	Guide Bridge Ironworks, Guide Bridge Abden Works ...	Near Manchester Kinghorn ...	Engines, Hooley Hill Scott, Kinghorn ...	67
Scott, John, & Co. ...	Engineers and Shipbuilders ...	Leeds Old Foundry, Marsh Lane	Leeds ...	Sciven, Leeds ...	855
Scriven & Co. ...	Machine Tool Makers ...	Overy Street Ironworks	Dartford ...	Seager, Engineer, Dartford	1819
Sagger, L. J. & C. ...	Engineers, Iron and Brass Founders	Dens Ironworks ... Bush Lane, Cannon Street	Athroath, N.B. London, E.C.	Shanks, Arbroath ...	5
Sanks, Alexander, & Son, Ltd. ...	Engineers ...	Union Ironworks ...	Johnstone ...	Shanks, Johnstone ...	3210
Samps, Thomas, & Co. ...	Engineers and Tool Makers ...	Atlas Works, Springburn	Glasgow ...	Loco, Glasgow ...	117
Sarp, Stewart & Co., Ltd. ...	Locomotive Engine Builders and Tool Makers ...	Irwell Foundry ...	Ramsbottom ...	Sharples, Engineers, Ramsbottom ...	31 Milnsbridge
Sarples, William, & Co. ...	Engineers, etc. ...	Milnbridge Ironworks, Pollard St., Milnsbridge Union Foundry, Huddersfield	Huddersfield ...	Shepherd Hill, Lancs	1307
Saw, Mark ...	Engineer, Millwright and Ironfounder	General Household, Suite and Fine Art Colter Ironfounder ...	Londes, E.C. Lead ...	Vulcan, Darwen ...	10
Saw, W. ...	Machine Tool Manufacturer, Brick Lane ...	Great Hall Street	Darwen ...	Vulcan, Darwen ...	251 Hop-
Sorrock, J. & R. ...	Manufacturers of Diving Apparatus	Lee Foundry ...	London, S.E.	Siebe, London ...	3099 West-
Sorbe, Gorman & Co. ...	Telegraphic and Electrical Engineers and Contractors	187 Westminster Bridge Road	London, S.W.	Siemens, London -	minster
Siemens Brothers & Co., Ltd. ...	Submarine Engineers and Manufacturers	12 Queen Anne's Gate, Westminster	Newcastle on Tyne	Siemens, Newcastle -	1715
		15 Victoria Buildings, Gringer Street, Westgate	on Tyne	Siemens, Newcastle -	
		63 New Cross Street		Siemens, Newcastle -	

Simpson, James, & Co., Ltd.	Builders Hydraulic and General Engineers, and Makers of Pumps Manufacturers of Cycles and the Simpson Lever Chain	10 Grosvenor Road, Pimlico ...	London, S.W.	Aquosity, London, S.W.	316 West- minster.
Simpson's Lever Chain and Cycle Co.	Boilermaker and Engineer ...	... Draycott ...	... Derbyshire ...	Chain, Draycott, Derby ...	1629
Sinclair, George	Marine Engineers, Millwrights, Shipsmiths and Ship Repairers	Albion Boilerworks ...	Leith ...	Sinclair, Lith ...	537
Smith, A. & D., & Co.	Boilermakers	Pier Engine Works, Thames Place, Lime- house Hole Park	London, E.	Smiths, Limehouse Pier	1711
Smith & Coventry, Ltd.	Engineers, Patentees and Manufacturers of Labour-Saving Machine Tools	Gresley Ironworks, Ordsal Lane, Salford	Manchester	Gresley, Manchester	564
Smith, Daniel, & Co. ...	Presses, Stamps, Shears and Metal Working Machinery (See <i>Ford-Smith, F.</i>)	Castle Ironworks, Raglan Street	W'iverhampt'n	Presses, Wolverhampton	7210
Smith, F. Ford-	Engineers' Tool Maker ...	Paragon Ironworks, South Parade	Halifax	Radial, Halifax	
Smith, G. F. ...	Machine Tools for Shipbuilders and Boilermakers	Possil Engine Works, Possilpark	Glasgow	Possil, Glasgow	3666
Smith, Hugh, & Co. ...	Engineer and Millwright, Maker of Stone Sawing Machinery, Cranes, etc. Worsted Machinery Makers	Maker of Crane Works ...	Keighley	Prince, Keighley	4
Smith, John ...	... ... ... ... ... ... ... ...	Burlington Shed ...	Keighley	Smith, Rodley	18 Stanningley
Smith, Prince, & Son ...	... ... ... ... ... ...	Rodley ...	Leeds	... ... ... ... ...	1102 Nat.
Smith, Thomas ...	... ... ... ... ...	... ... ... ... ...	Heywood	Smiths, Heywood	...
Smith, William, & Brothers, Ltd.	Loom Makers ...	Sun Ironworks ... Royal Exchange ... (Tuesday and Friday) New Southgate ...	... ... ... ...	... ... ... ...	Near London
Southgate Engineering Co., Ltd., The	Crane, Machine Tool and Ordnance Machinery Makers	O. & P. Pillars)	Manchester	Centrifugal, New Southgate	
Spencer, James, & Co.	Machine Tool, Crane and Weighing Machine Makers	Chamber Ironworks, Hollinwood	Manchester	A.B.C. Engineering Code used	207
Spencer, John, & Co,	Machine Tool Makers ...	Atlas Works, Pitt Street	Keighley	Spencer, Hollinwood, Manchester	118

NAME,	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Spencer, John, & Sons, Ltd.	Steel Manufacturers ...	... Cusseburn Forge ...	Newcastle-on-Tyne	Newcastle-on-Tyne	1212 Nat. 464 P.O.
Spetch & Thomas	Gas Engineers	... Newburn Steel Works ...	Newburn	Tyne	1212 Nat. 464 P.O.
Springfield Cycle Co., Ltd. ...	Cycle Manufacturers ...	... West-End Mills, Long-side Lane	Bradford		
Standard Engineering Co., The	Engineers, Boot and Shoe Machinists	... Sandiacre ...	Nottingham	Valkyrie, Sandiacre ...	1631:
Standard Tool Co., The	Machine Tool Makers and Iron-founders	43 Welford Road	Leicester	Standard Engineers, Leicester	502
Stead Brothers	Engineers, Millwrights, etc.	Mearclough	Sowerby Bridge	Stead Brothers, Halifax	305
Stell, Stephen	Tool Maker	Hare Street, Gibbet Lane	Halifax	Stell, Alkincote, Keighley	
Stephen Cotton & Co.	(See Cotton, Stephen, & Co.)	Alkincoate Works...	Keighley		
Stephens, Smith & Co., Ltd.	Engineers and Electricians ...	Cuba Street, Millwall	London, E.	Reckenzaun, London	
Stephenson, R., & Co., Ltd.	Locomotive and Marine Engineers, and Iron Founders	South Street	Newcastle-on-Tyne	Rocket, Newcastle-on-Tyne	458 P.O.
Stevenson & Co.,	Engineers and Boilermakers	Canal Foundry, Fylde Road	Preston	Propeller, or Stevenson, Preston	1153 Nat. 57
Stewart, John, & Son, Ltd.	Engineers, Shipbuilders, Dry Dock Proprietors	22 Bilitier Street	London, E.C.	Steamships, London	4428 Avenue
Stirk, John, & Sons	Tool Makers	Ovenden Road	Halifax	Stirk, Halifax	124
Stone, J., & Co.	Electrical Engineers, Bronze, Brass and Iron Founders, Manufacturers of Fire Appliances, Valves and Fittings for Water Supply, Boiler Fittings, Copper Nail, Rivet, Bolt and Nut Makers	Deptford...	London, S.E.	Stone, Deptford, London	2 Deptford
Storey, Isaac, & Sons	Brassfounders, Coppersmiths and Engineers	...			Little Peter Street and Empress Street, Cornbrook
					Stork, Manchester ...

Stothing & Pitt, Ltd. ...	Engineers ...	... ...	... ...	... ...	Bath ...	... Stothert, Bath ...	39
Strang, Joseph, Ltd. ...	Ironfounders, Engineers, Calico Printers' and Bleachers' Machinists	... ...	... ...	... ...	Ramsbottom	Strang, Ramsbottom	109
Stubbs, Joseph ...	Machine Maker and Ironfounder ...	... ...	... ...	... ...	Manchester	Winding, Manchester	440
Sudworth & Settle, Ltd. ...	Cycle Manufacturers and Cycle Fittings Engineers ...	... ...	... ...	... ...	Nottingham	Fittings, Nottingham	5129
Summers & Scott ...	... ...	... ...	... ...	... ...	Gloucester	Summers, Gloucester	816
Sunderland Forge and Engineering Co., Ltd., The ...	Electrical and General Engineers and Forge Masters	... ...	... ...	... ...	Sunderland	Marr, Sunderland ...	54
Swan, C. S., & Hunter, Ltd. ...	Shipbuilders, Floating Graving Dock Builders and Ship Repairers	... ...	... ...	... ...	Newcastle-on-Tyne	Hunter, Wallsend	411 P.O.
Swift, George ...	Machine Tool Maker ...	... ...	... ...	... ...	Halifax	... Swift Claremont,	2 Nat.
Sykes, Alfred ...	Electrical and Mechanical Engineer	... ...	... ...	... ...	Spring Place Mill, Springwood Street	Halifax	Wallsend
Sykes, John, & Sons, Ltd. ...	Machinists ...	... ...	... ...	... ...	Turnbridge Machine Works	Light, Huddersfield	375 and
						Ezra, Huddersfield .	1579 Bradford
							307
Tate, James ...	Engineer ...	... ...	... ...	... ...	Harris Street	... Bradford	1402
Tatham, William, & Co. ...	Cotton Waste, Wadding, etc., Machinery Makers	... ...	... ...	... ...	Vulcan Works	... Rochdale	144
Taylor & Hubbard ...	Engineers and Cranemakers	... ...	... ...	... ...	Kent Street Works	... Leicester	575
Taylor, Lang & Co., Ltd. ...	Textile Machinists ...	... ...	... ...	... ...	Castle Ironworks	... Stalybridge	107
Taylor, Robert, & Sons ...	Steam Boilers and Boiler Fittings	... ...	... ...	... ...	Marsden Ironworks	... Huddersfield	3 Marsden
Taylor, Thomas ...	Engineer and Machinist	... ...	... ...	... ...	Gladstone Street	... Leicester	86
Taylor, Wordsworth & Co. ...	Machinists ...	... ...	... ...	... ...	167 Water Lane	... Leeds	540
							Wordsworth, Leeds

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Thompson, J. W. ...	Ironfounder ...	Bridge Foundry ...	Sunderland ...	Thompson Foundry, Sunderland	154 Nat.
Thomson, Son & Co. ...	Engineers, Millwrights, Machine Makers and Founders	Douglas Foundry ...	Dundee ...	Turbine, Dundee ...	402
Thornycroft, John I., & Co. ...	Marine and General Engineers, Shipbuilders and Boilmakers	Church Wharf, Chiswick	London, W. ...	Thornycroft, London	6 Hammer-smith
Thornton & Crebbin ...	Ironfounders and Engineers	Hannerton Street	Bradford ...	Ironfounders, Bradford	226
Thwaites Brothers, Ltd, ...	Engineers ...	Vulcan Iron Works, Thornton Road	Bradford ...	Thwaites, Bradford	325
Tinker, Shenton & Co., Ltd. ...	Boilmakers ...	Hyde Boiler Works	Hyde, Cheshire ...	Duplex, Hyde	21
Tomlinson, G. W. ...	Machinist ...	Engine Bridge Works ...	Huddersfield	Tomlinson, Huddersfield	70
Tomlinson, James (Rochdale), Ltd. ...	Machinery Manufacturers ...	Soho Ironworks, Oldham	Rochdale ...	Tomlinson, Rochdale	54
Tonkinson, H., & Sons ...	Ironfounders, Plumbers and Smiths	Boro' Road Foundry, Borough Road	Sunderland ...	... ...	127 Nat.
Trent Cycle Co., Ltd, The ...	Cycle Manufacturers ...	Long Eaton ...	Nottingham ...	Cycle, Long Eaton ...	1624
Turnbull, Alexander, & Co. ...	Valve and Steam Trap Makers	St. Mungo Works, Bishop-briggs,	Glasgow ...	Valve, Bishopbriggs	4394
Turner & Co. ...	Engineers ...	1 George Street, Grove	London, N.W. ...	Tension, London	
Turton, George, Platts & Co. ...	Engineers' Manufacturers ...	Savile Street ...	Sheffield ...	Butter, Sheffield ...	1370
Umpherston & Co., Ltd. ...	Engineers and Millwrights ...	... Bowershall EngineWorks, Bonnington Road	Leith ...	Umpherston, Leith	
Unbreakable Pulley and Mill-gearing Co., Ltd., The ...	Engineers and Millwrights ...	Hyde Road Engineering Works, West Gorton	Manchester ...	Strength, Manchester	52 Nat.
Urmson & Thompson ...	Engineers and Millwrights ...	56 Cann Street ...	London, E.C. ...	Hathershaw Ironworks	5051 Bank
				Oleham ...	

West, John	... ...	... ...	... ...	Gas Works Plant Gun Metal, Copper, and Brass Founder	157 and 159 Back Church Lane, Commercial Road Borough Foundry, Temple Town	London, E. ... South Shields	Jumpweld, London Castings, South Shields	7 Nat.
Wheatley & Taylor	... ...	... ...	... ...	Ironfounders ...	... ...	Bradford	... ...	966
Whittaker, C., & Co.	... ...	... ...	... ...	Engineers and Millwrights ...	... ...	Oldham	... ...	83
Whittaker, William, & Sons	... ...	... ...	... ...	Engineers ...	... ...	Paisley	... White, Paisley	138
White, Thomas, & Sons	... ...	... ...	... ...	Engineers, Machinists and Tool Makers ...	Laigh Park Engine and Machine Works	Colne...	White, Colne	13
White, W. B.	... ...	... ...	... ...	Machinist, Iron and Brass Founder, Loom Maker, Spring Maker, etc.	Red Scar Spring Works	Dock Street	Whiteley's Wheeleries, Leeds	925 925A
Whiteley's Acme Cycle Co., Ltd.	... ...	... ...	... ...	Cycle Manufacturers ...	... Showroom—Guildford Street	Leds...	Whiteley, Lockwood	98
Whiteley, William, & Sons, Ltd.	... ...	... ...	... ...	Woollen Machinists ...	Prospect Ironworks, Lockwood	Huddersfield	Leeds, ... Taps, Salford,	1144
Whitley Partners	... ...	... ...	... ...	Engineers, Iron and Brass Founders ...	Railway Works ...	Leeds...	Torpedo, Leeds	...
Widdowson, J. H.	... ...	... ...	... ...	Screwing Tackle Manufacturer	Britannia Works, Ordsal Lane, Salford	Manchester ...	Taps, Salford,	
Wiggin Richardson & Co.	... ...	... ...	... ...	(See Richardson, Wiggin, & Co.)				
Wilkinson, G., & Sons	... ...	... ...	... ...	Engineers, Machine Tool Makers, Iron & Brass Founders' Machinists Brass and Gun Metal Founders ...	Bradford Works	Road	Keighley	Wilkinson, Engineers Keighley
Wilkinson, P., & Sons	... ...	... ...	... ...	Engineers and Ironfounders	Tottenham Mews	Tool	London, W.	Rapid, London
Wilkinson, William, & Co., Ltd.	... ...	... ...	... ...	Brassfounders, etc. ...	... Holme House Foundry, Swinley Lane	Wigan	Sheffield	... Williams, Sheffield...
Williams Brothers	... ...	... ...	... ...	(See Hartnell, Wilson.)	... Green Lane	... ...	Sheffield	... Winders, Sheffield ...
Wilson Hartnell	... ...	... ...	... ...	Engineers and Ironfounders	... Royds Works	... ...	Wigan	... Haulage, Wigan ...
Winder Brothers, Ltd.	... ...	... ...	... ...	Engineers and Ironfounders ...	... Barley Brook Foundry	... ...	Wigan	55

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester ...	Sluice, Manchester ...	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights ; Makers of Corliss Engines	Victor'a Foundry, Garside Street	Bolton ...	Woods, Bolton ...	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield ...	Rixon, Sheffield ...	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast ...	Spencer, Belfast ...	56, 66, 485
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan ...	Engines, Wigan ...	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Coppersmiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees ...	Worth Mackenzie ...	47 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester ...	Wrens, Manchester	
Wright, B. & D.	Engineers and Millwrights ...	Oxford Works, Meanwood Road	Leeds ...	Excel, Leeds ...	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boilermakers	Isle of Dogs, Poplar	London, E. ...	Yarrow, London ...	114 Eastern
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn ...	Yates, Blackburn ...	43 Nat.

SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Woods, Hamilton, & Co Ltd.	Engineers and Ironfounders...	South Hall Street, Ordsall Lane, Salford.	Manchester ...	Sluice, Manchester ...	1962 Nat.
Wood, J. & E. ...	Iron and Brass Founders, Engineers and Millwrights ; Makers of Corliss Engines	Victor'a Foundry, Garside Street	Bolton ...	Woods, Bolton ...	45
Woodhouse & Rixson	Bent Crank and Steel Forging Manufacturers	Chantry Steel and Crank Works, Bessemer Rd., Attercliffe	Sheffield ...	Rixon, Sheffield ...	1113
Workman, Clark & Co., Ltd.	Shipbuilders, Engineers and Boiler-makers	Spencer Basin ...	Belfast ...	Spencer, Belfast ...	56, 66, 485
Worsley Mesnes Iron Works Co.	Engineers and Ironfounders...	Worsley Mesnes Iron Works	Wigan ...	Engines, Wigan ...	46
Worth, Mackenzie & Co., Ltd.	Engineers, Iron and Brass Founders, Coppersmiths and Brass-finishers	Phoenix Works ...	Stockton-on-Tees ...	Worth Mackenzie ...	47 Nat.
Wren, Henry, & Co. ...	Engineers, Millwrights and Machine Makers	London Road Ironworks	Manchester ...	Wrens, Manchester	
Wright, B. & D. ...	Engineers and Millwrights ...	Oxford Works, Mean wood Road	Leeds ...	Fxcel, Leeds ...	443
Yarrow & Co., Ltd. ...	Marine Engineers, Shipbuilders and Water Tube Boilermakers	Isle of Dogs, Poplar	London, E. ...	Yarrow, London ...	114 Easter
Yates & Thom ...	Engineers, Millwrights and Boiler-makers	Canal Foundry and Victoria Foundry	Blackburn ...	Yates, Blackburn ...	43 Nat.

SECTION II.

ARRANGED UNDER THE RESPECTIVE TRADE HEADINGS.



ENGINEERING EMPLOYERS FEDERATION UNDER THEIR RESPECTIVE TRADES.

Acetyline Gas Plant—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
Fraser & Chalmers, Ltd., London.
Holliday, Read, & Sons, Ltd., Huddersfield.
Pope, W., & Son, Ltd., London.

Agricultural Machinery and Implements—

Crowley, John, & Co., Ltd., Sheffield.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gainsborough.
Richmond & Chandler, Ltd., Manchester.

Air Compressors—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.
Barraclough, Joseph, & Sons, Barnsley.
Beeley, Thomas, Hyde.
Bradley, R., & Co., Wakefield.
Campbell & Calderwood, Paisley.
Carrick & Wardale, Gateshead-on-Tyne.
Carruthers, J. H., & Co., Glasgow.
Clayton, Goodfellow & Co., Ltd., Blackburn.
Clayton, Howlett & Co., London.
Craig, A. F., & Co., Ltd., Paisley.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Douglas Forge Co., Ltd., Wigan.

Air Compressors—*continued.*

Drysdale & Co., Glasgow.
Easton, Anderson & Goolden, Ltd., Erith.
Evans, Joseph, & Sons, Wolverhampton.
Fawcett, Preston & Co., Ltd., Liverpool.
Foster, Joseph, & Sons, Preston.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Greenock Foundry Co., Greenock.
Hanna, Donald & Wilson, Paisley.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kenworthy, Taylor & Co., Barnsley.
Kerr, Stuart & Co., Stoke-on-Trent.
Larneth, Thomas, & Co., Manchester.
Lees, Anderson & Co., Glasgow.
Manlove, Allott & Co., Ltd., Nottingham.
Mather, Alex., & Son, Edinburgh.
Meldrum Brothers, Manchester.
Milne, James, & Son, Ltd., Edinburgh.
Nasmyth, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Manchester.
Pope, W., & Son, Ltd., London.
Qualter, Hall & Co., Barnsley.
Ross, R. G., & Son, Glasgow.
St. George's Ironworks, Ltd., Manchester.
Sharples, William, & Co., Ramsbottom.
Stevenson & Co., Ltd., Preston.

Air Compressors—continued.

Strang, Joseph, Ltd., Ransbottom.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd.,
 London.
 Wailes, George, & Co., London.
 Walker Brothers, Wigan.
 West End Engine Works Co.,
 Edinburgh.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 White, Thomas, & Sons, Paisley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Iron Works Co.,
 Wigan.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Yates & Thom, Blackburn.

Air Condensers—

(See Condensing and Cooling Plant.)

Air Propellers—

(See Fans and Blowers.)

Air Pumps—

(See Pumps and Pumping Engines;
 also Air Compressors.)

Alloys—

(See Metals—Special.)

Aluminium Founders—

Billington & Newton, Longport.
 Bowen & Co., London.
 Fletcher Brothers, Ashton-under-Lyne.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ranger & Hooper, London.

Ammunition Machinery—

(See Cartridge-Making Machinery;
 Explosives Machinery.)

Anchors—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Darlington Forge Co., Ltd., Dar-
 lington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Rogerson, John, & Co., Ltd., Wol-
 singham.
 Spencer, John, & Sons, Ltd., New-
 castle-on-Tyne.

Annealing Furnaces—

(See Furnaces.)

Anti-Friction Metals—

(See Metals—Special.)

Arc Lamps—

(See also Electric Light Fittings.)
 Crompton & Co., Ltd., London and
 Chelmsford.
 Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 General Electric Co., Ltd., Manchester.
 Holliday, Read, & Sons, Ltd.,
 Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-
 Tyne.
 Jackson, P. R., & Co., Ltd., Man-
 chester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Royce, F. H., & Co., Ltd., Man-
 chester.
 Siemens Brothers & Co., Ltd., London.

Armour Plates—

Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Asbestos-Working Plant—

Leach & Co., Rochdale.

Ash Hoists and Ejectors—

Alley & Maclellan, Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Greenock Foundry Co., Greenock.
 Mechan & Sons, Glasgow.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Siemens Brothers & Co., Ltd., London.

Axles—

(*See also Railway Plant.*)

Allan, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Cravens, Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Mather, Alex., & Son, Edinburgh.
 Rogerson, John, & Co., Ltd., Walsingham.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 Woodhouse & Rixson, Sheffield.

Baling Presses—

(*See Presses—Screw and Steam;
 also Hydraulic Presses.*)

Barges—

(*See Shipbuilders.*)

Barring Engines—

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Buckley & Taylor, Oldham.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Walmsley, Charles, & Co., Ltd., Bury.
 Wood, John and Edward, Bolton.
 Yates & Thom, Blackburn.

Bars—Furnace—

(*See Fire Bars.*)

Bars—Iron and Steel—

(*See Steel and Iron Plates and Bars.*)

Batteries—Electric—

(*See Electric Batteries.*)

Beaming, Warping and Sizing Machinery—

(*See also Textile Machinery.*)

Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cliffe & Co., Huddersfield.
 Dodd, Samuel, Oldham.
 Hacking & Co., Bury.

Beaming, Warping and Sizing Machinery—continued.

Hattersley, George, & Sons, Ltd., Keighley.
 Holt, Thomas, Ltd., Rochdale.
 Hutchinson, Hollingworth & Co., Ltd., Huddersfield.
 Leach & Co., Rochdale.
 Livesey, Henry, Ltd., Blackburn.
 Richardson, Tuer & Co., Manchester.
 Smith, William, & Brothers, Ltd., Heywood.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Beams and Girders—

(See Bridges, Roofs, and Structural Iron and Steel Work.)

Bearing - Special Metals—

(See Metals—Special.)

Belt Pulleys—

(See Mill Gear, Shafting and Shaft Fittings.)

Bending Rolls and Machines—Beams, Plates, Rails—

(See also Rail Benders.)

Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Bigwood, J., & Son, Wolverhampton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Cameron, John, Manchester.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edward, George, & Co., Johnstone.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.

Bending Rolls and Machines—Beams, Plates, Rails—continued.

Hulse & Co., Ltd., Manchester.
 Midgley & Sutcliffe, Bradford.
 Noble & Lund Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, G. F., Halifax.
 Smith, Hugh, & Co., Glasgow.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.

Bessemer Steel—

(See Steel and Iron Plates and Bars.)

Bessemer Steel Plant—

(See Steel Works Plant.)

Bevelling Machines for Ship's Frames—

Davis & Primrose, Leith.

Bicycles—

(See Cycles and Cycle Parts.)

Billets and Blooms—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.

Bitumen Refiners—

Callendar's Cable and Construction Co., Ltd., London.

Blast Furnace Plant—*(See also Blowing Engines.)*

Adamson, Daniel, & Co., Dukinfield.
 Ashmore, Benson, Pease & Co., Ltd.,
 Stockton-on-Tees.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Stevenson & Co., Ltd., Preston.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Yates & Thom, Blackburn.

Bleaching Machinery—*(See also Dyeing Machinery.)*

Bentley & Jackson, Ltd., Bury.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Downham, J., & Co., Bury.
 Dykes, G. & J., Bury.
 Edmeston, Archd., & Sons, Man-
 chester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brothers, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Lancaster & Tonge, Ltd., Manchester.
 Matthews, William, & Co., Man-
 chester.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, Joseph, & Co., Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Walker, Samuel, Manchester.

Blocks—Wood and Iron—*(See also Pulley-Blocks.)*

Coubro & Scrutton, London.

Blooms—*(See Billets and Blooms.)***Blowers and Exhausters—**

Bradley, R., & Co., Wakefield.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Carrick & Wardale Gateshead-on-Tyne
 Daglish, Robert, & Co., St. Helens.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Empire Engineering Co., Manchester.
 Foster, Joseph, & Sons, Preston.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Ledward, T., & Co., London and
 Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Meldrum Brothers, Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Pope, W., & Son Ltd., London.
 Thwaites Brothers, Ltd., Bradford.
 Waller, George, & Co., Stroud.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

**Blowing Engines—for Furnace
Blast, etc.—**

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Carrick & Wardale, Gateshead-on-Tyne
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Kitson & Co., Leeds.
 Nasmyth, Wilson & Co., Ltd.,
 Manchester.
 St. George's Ironworks, Ltd., Man-
 chester.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Watson, Henry, & Sons, Newcastle-
 on-Tyne.
 Whitaker, C., & Co., Bradford.
 Worsley Mesnes Iron Works Co.,
 Wigan.
 Yates & Thom, Blackburn.

ENGINEERING EMPLOYERS' FEDERATION

Bobbin-Making Machinery—

Ayrton, William, & Co., Manchester.
Heap, William, & Co., Ltd., Ashton-under-Lyne.
White, Thomas, & Sons, Paisley.

Boiler Furnaces—

Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Beeley, Thomas, Hyde.
Bennis, Edward, & Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.
Burnet, Lindsay, & Co., Glasgow.
Clark, George, Ltd., Sunderland.
Davy Brothers, Ltd., Sheffield.
Donkin, Bryan, & Co., Ltd., London.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Edie, Henry, & Co., London.
Foster, Joseph, & Sons, Preston.
Galloways, Ltd., Manchester.
Hick, Hargreaves & Co., Ltd., Bolton.
Leeds Forge Co., Ltd., Leeds.
Lees, Anderson & Co., Glasgow.
M'Kie & Baxter, Glasgow.
Meldrum Brothers, Manchester.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Oldham Boiler Works Co., Ltd., Oldham.
Oxley Brothers, Ltd., Sheffield.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Richardson, Tuer & Co., Manchester.
Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
Stevenson & Co., Ltd., Preston.
Yates & Thom, Blackburn.

Boiler-Making Machine Tools—

(See Machine Tools.)

Boiler Mountings—

(See also Engine and Boiler Fittings.)

Adams, Thomas, Manchester.
Adamson, Daniel, & Co., Dukinfield.
Adamson, Joseph, & Co., Hyde.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Beeley, Thomas, Hyde.

Boiler Mountings—*continued.*

Bennis, Edward, & Co., Ltd., Bolton.
Bigwood, J., & Son, Wolverhampton.
Billington & Newton, Longport.
Bolton Iron and Steel Co., Ltd., Bolton.
Burnet, Lindsay, & Co., Glasgow.
Carmichael, James, & Co., Ltd., Dundee.
Carter, James, & Sons, Stalybridge.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Coates, Victor, & Co., Ltd., Belfast.
Cochran & Co., Birkenhead.
Cockburn, David, Glasgow.
Dewrance & Co., London.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-Lyne.
Foster, Joseph, & Sons, Preston.
Frost & Sons, London.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Greenock Foundry Co., Greenock.
Gresham & Craven, Ltd., Manchester.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Madan, Charles S., & Co., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brothers, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Musgrave, John, & Son, Ltd., Bolton.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Sharples, William, & Co., Ramsbottom.
Smith, G. F., Halifax.
Stevenson & Co., Ltd., Preston.
Stone, J., & Co., London.
Storey, Isaac, & Sons, Manchester.
Taylor, Robert, & Sons, Huddersfield.
Tinker, Shenton & Co., Ltd., Hyde.
Turnbull, Alexander, & Co., Glasgow.
Watson, Henry, & Sons, Newcastle-on-Tyne.
Wilkinson, Wm., & Co., Ltd., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Yates & Thom, Blackburn.

Boilers—Steam—**Auxiliary and Donkey—**

Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Booth, Joseph, & Brothers, Leeds.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd., Dundee.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Eltringham, J. T., & Co., South Shields.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Lees, Anderson & Co., Glasgow.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Morton, S. & H., & Co., Leith.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Simons, William, & Co., Ltd., Renfrew.

Auxiliary and Donkey—*continued.*

Southgate Engineering Co., Ltd., New Southgate, near London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Workman, Clark & Co., Ltd., Belfast.

Land—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Amos & Smith, Hull.
 Beeley, Thomas, Hyde.
 Burnet, Lindsay, & Co., Glasgow.
 Carmichael, James, & Co., Ltd., Dundee.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Croom & Arthur, Leith.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Dunlop, David J., & Co., Port-Glasgow.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The, Dunston-on-Tyne.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Gourlay Brothers & Co., Dundee.
 Green, Thomas, & Son, Ltd., Leeds.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.

Boilers—Steam—continued.**Land—continued.**

Hawthorns & Co., Ltd., Leith.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holdsworth & Sons, Bradford.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Laren, J. & H., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mar-hall, Sons & Co., Ltd., Gainsborough.
 Morton, S. & H., & Co., Leith.
 Musgrave, John, & Son, Ltd., Bolton.
 Napier, R., & Sons, Ltd., Glasgow.
 Nasmyth, Wilson & Co., Ltd., Manchester,
 North Eastern Marine Engineering
 Co., Ltd., Sunderland.
 Oldham Boiler Works Co., Ltd.,
 Oldham.
 Peckett & Sons, Bristol.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Renfrew.
 Sinclair, George, Leith.
 Southgate Engineering Co., Ltd., New
 Southgate, near London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Taylor, Robert, & Sons, Huddersfield.
 Tinker, Shenton & Co., Ltd., Hyde.
 Walker Brothers, Wigan.
 Yates & Thom, Blackburn.

Marine—

Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering
 Co., Ltd., Dundee.

Marine—continued.

Carmichael, James, & Co., Ltd.,
 Dundee.
 Central Marine Engine Works, West
 Hartlepool.
 Clark, George, Ltd., Sunderland.
 Clydebank Engineering and Ship-
 building Co., Ltd., Clydebank,
 N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Dickinson, John, & Sons, Ltd., Sun-
 derland.
 Dunlop David J., & Co., Port-Glas-
 gow.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., The,
 Dunston-on-Tyne.
 Eltringham, J. T., & Co., South
 Shields.
 Fawcett, Preston & Co., Ltd., Liver-
 pool
 Fleming & Ferguson, Ltd., Paisley.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering
 and Iron Shipbuilding Co., Ltd.,
 Glasgow
 M'Kie & Baxter, Glasgow.
 Morton, S. & H., & Co., Leith..
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South
 Shields.

Boilers—Steam—continued.**Marine—continued.**

Redpath & Paris, London.
 Richardson, Thonias, & Sons, Ltd., Hartlepool.
 Richardson, Wigham, & Co., Newcastle-on-Tyne.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Simons, William, & Co., Ltd., Renvre.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Tinker, Shenton & Co., Ltd., Hyde.
 Workman, Clark & Co., Ltd., Belfast.

Water Tube—

Adamson Daniel, & Co., Dukinfield.
 Burnet, Lindsay, & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Coates, Victor, & Co., Ltd., Belfast.
 Coulthard, T., & Co., Preston.
 Davy Brothers, Ltd., Sheffield.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fleming & Ferguson, Ltd., Paisley.
 Fraser & Chalmers, Ltd., London.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Gourlay Brothers & Co., Dundee.
 Greenock Foundry Co., Greenock.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Inglis, A. & J., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.

Water Tube—continued.

London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 M'Kie & Baxter, Glasgow.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Maudslay, Sons & Field, Ltd., London.
 Muir & Houston, Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Penn, John, & Sons, Ltd., London.
 Readhead, John, & Sons, South Shields.
 Redpath & Paris, London.
 Rose, Downs & Thompson, Ltd., Hull.
 Rowan, David, & Son, Glasgow.
 Thornycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Boiler Tubes—(See also **Tubes.**)

Brown, John, & Co., Ltd., Sheffield.
 Galloways, Ltd., Manchester.

Bolt and Nut Making Machinery—

Craven Brothers, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.

Bolts, Rivets, Screws, Nuts and Washers—

(See also Screws and Studs.)

Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Ford-Smith, F., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Jardine, John, Nottingham.
 Kirby Banks Screw Co., Ltd., Leeds.
 Manganeze Bronze and Brass Co., Ltd., London.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pool, L., & Son, Leeds.
 Stone, J., & Co., London.

Boring and Tapping Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellars, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Bookbinders' Machinery—

Bremner Machine Co., Otley.
 Dawson, H. & J., Bradford.
 Dawson & Sons, Otley.
 Furnival & Co., Manchester.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Miller & Richard, Edinburgh.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Payne & Sons, Otley.
 Pearson & Bennion, Ltd., Leicester.
 Richmond, Joseph, & Co., London.

Box-Making Machinery—

Cole, T. & W., London.
 Glover, M., & Co., Leeds.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.

Boot and Shoe Making Machinery—

Bradbury & Co., Ltd., Oldham.
 Davis, A. J., Leicester.
 Greenwood & Batley, Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Mudd, W. R., & Co., Leicester.
 Pearson & Bennion, Ltd., Leicester.
 Pegg, Samuel, & Sons, Leicester.
 Standard Engineering Co., Leicester.

Brakes—Railway—

(See also Railway Plant.)
 Fraser & Chalmers, Ltd., London.

Brass and Bronze Founders and Finishers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adams, Thomas, Manchester.
 Adams, W. W., London.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Harrison & Co., Manchester.

Brass and Bronze Founders and Finishers—continued.

Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Bailey & Garnett, Ltd., Stalybridge.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Barns, J. C., London.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Bowen & Co., London.
 Broad, G., & Son, London.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, Bunnett & Co., Ltd., London.
 Clark, J. & T., Bradford.
 Clarke, T. A. W., Leicester.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cockburn, David, Glasgow.
 Cooper Brothers, Ltd., Burnley.
 Cowen, G. R., & Co., Nottingham.
 Cran, John, & Co., Leith.
 Crook, Thomas T., Bolton.
 Crow, George, London.
 Daglish, Robert, & Co., St. Helens.
 Darker, F., & Co., London.
 Dewrance & Co., London.
 Dickinson, John, & Co., Keighley.
 Dixon, S., & Son, Leeds.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Edie, Henry, & Co., London.
 Edmondson, John A., Leeds.
 Empire Engineering Co., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.

Brass and Bronze Founders and Finishers—continued.

Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Jenkins, C., & Co., London.
 Johnston, R., & Co., Ltd., London.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kenworthy, Taylor & Co., Barnsley.
 Kincaid, John G., & Co., Greenock.
 Kirkham, J. & W., Bolton.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Lawson, J., London.
 Livesey, Henry, Ltd., Blackburn.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Low, James F., & Co., Monifieth.
 Madan, Charles S., & Co., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marchant, G. M., Huddersfield.
 Marner, G. W., London.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Mayes, John, London.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.

Brass and Bronze Founders and Finishers—continued.

Needham Brothers & Brown, Barnsley.
 Noble & Lund, Felling-on-Tyne.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Pilling, John, & Sons, Ltd., Colne.
 Pope, W., & Son, Ltd., London.
 Ranger & Hooper, London.
 Rankin & Blackmore, Greenock.
 Ratcliffe, J., & Sons, Leeds.
 Redpath & Paris, London.
 Remington, T. W., & Co., London.
 Reynolds, James, & Co., Belfast.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, J. H., London.
 Roger, R., & Co., Stockton-on-Tees.
 Rosling & Appleby, Bradford.
 Russell, S., & Sons, Leicester.
 Ryder, T., & Co., Manchester.
 St. George's Ironworks, Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Seager, L. J. & C., Dartford.
 Sharples, William, & Co., Ramsbottom.
 Shoard, W., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Sons, Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thwaites Brothers, Ltd., Bradford.
 Tomlinson, James (Rochdale) Ltd., Rochdale.
 Wailes, George, & Co., London.
 Wainwright, Thomas, & Co., Stalybridge.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wearmouth Foundry Co., Ltd., Sunderland.
 Wells, Jonas, Keighley,
 West, John, London.
 White, W. B., Colne.
 Whitley Partners, Leeds.
 Wilkinson, G., & Sons, Keighley.
 Wilkinson, P., & Sons, London.
 Williams Brothers, Sheffield.

Brass and Bronze Founders and Finishers—continued.

Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.

**Brass and Copper Tubes—
(See Tubes.)****Brass Shells and Liners—**

Lancaster & Tonge, Ltd., Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Thwaites Brothers, Ltd., Bradford.
 Watson, Henry, & Sons, Newcastle-on Tyne.
 Wells, Jonas, Keighley.
 Whitley Partners, Leeds.

Bread and Biscuit Machinery—

Morrison, William, & Sons, Leith.

Breakers—

(See Coal and Coke Breakers, Quartz Crushers, Stone Breakers.)

Brewery and Distillery Plant—

Abernethy, James, & Co., Aberdeen.
 Bertrams, Ltd., Edinburgh.
 Blundell's London Copper and Brass Works, Ltd., London.
 Coates, Victor, & Co., Ltd., Belfast.
 Daglish, Robert, & Co., St. Helens.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hunter & English, London.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 Marsden, John, & Son, Liverpool.
 Mather, Alex., & Son, Edinburgh.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ryder, T., & Co., Manchester.
 Waller, George, & Co., Stroud.
 Walker, James, & Son, Edinburgh.
 West End Engine Works Co., Edinburgh.
 Woods, Hamilton, & Co., Ltd., Manchester.

Brick and Tile-Making Machinery—

Bradley & Craven, Wakefield.
 Bradley, R., & Co., Wakefield.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Davis, A. J., Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Douglas Forge Co., Ltd., Wigan.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Johnson, William, & Sons, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Sons, Ltd., Belfast.
 Pegg, Samuel, & Son, Leicester.
 Pullan & Mann, Leeds.
 Scholefield, R., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Thornton & Crebbin, Bradford.

**Bridge Foundation Cylinders—
(See Cylinders for Bridge Foundations.)****Bridges, Roofs and Structural Iron and Steel Work—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Clark, Bennett & Co., Ltd., London.
 Clayton, Son & Co., Ltd., Leeds.
 Cole, T. & W., London.
 Cran, John, & Co., Leith.
 De Bergue & Co., Ltd., Manchester.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.

Bridges, Roofs and Structural Iron and Steel Work—continued.

Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson & Brother, Bolton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 M'Kinnon, William, & Co., Aberdeen.
 Mather, Alex., & Son, Edinburgh.
 Mechan & Sons, Glasgow.
 Moreland, Richard, & Son, Ltd., London.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Oxley, George, & Sons, Sheffield.
 Richards, W., & Son, Leicester.
 St. Pancras Ironworks Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Thornton & Crebbin, Bradford.
 Turner & Co., London.
 Walker Brothers, Wigan.
 West's Gas Improvement Co., Ltd., Manchester.

Briquette-Making Machinery—

Johnson, William, & Sons, Leeds.
 Kincaid, John G., & Co., Greenock.
 Middleton, Robert, Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

**Bronze Founders—
(See Brass and Bronze Founders.)****Buffers—Railway—**

(See also Railway Plant.)

Allen, Edgar, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Kirkstall Forge Co., Leeds.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Buffing Wheels—

Glover, M., & Co., Leeds.
 Luke & Spencer, Ltd., Manchester.

Buoys—Mooring—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Hanna, Donald & Wilson, Paisley.
 Jones, John, & Sons, Liverpool.
 Mechan & Sons, Glasgow.

Cables—Chain—

(See Chains.)

Cables—Haulage—

(See Wire and Wire Ropes.)

Cable-Haulage Machinery—

(See Haulage Machinery and Appliances.)

Cable-Making Machinery—

Clarke, T. A. W., Leicester.
 Johnson & Phillips, Old Charlton.

Cables & Wires—Electric Light, Telegraph and Telephone.

Callender's Cable and Construction Co., Ltd., London.
 Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Phosphor Bronze Co., Ltd., London.
 Siemens Brothers & Co., Ltd., London.

Cableways—

Henderson, John M., Aberdeen.

Calenders—

Bently & Jackson, Ltd., Bury.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Milne, James, & Son, Ltd., Edinburgh.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph, & Co., Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umpherston & Co., Ltd., Leith.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Walker, Samuel, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Calico Printing and Dyeing Machinery—

Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker, Samuel, Manchester.

Capstans—Steam, Hydraulic, Hand—

(See also Hydraulic Capstans.)
 Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.

**Capstans—Steam, Hydraulic, Hand—
*continued.***

Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clarke, Chapman & Co., Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Davis & Co., Ltd., London.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Fielding & Platt, Ltd., Gloucester.
 Fisher & Co., Paisley.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Harfield & Co., Ltd., Blaydon-on-Tyne.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kincaid, John G., & Co., Greenock.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Napier Brothers, Ltd., Glasgow.
 Qualter, Hall & Co., Barnsley.
 Reid, Thomas, & Sons, Paisley.
 Roger, R., & Co., Stockton-on-Tees.
 Smith, Hugh, & Co., Glasgow.
 Walker Brothers, Wigan.
 West's Gas Improvement Co., Ltd., Manchester.
 Wood & Gee, Wigan.

Carbons for Electrical Purposes

Crompton & Co., Ltd., London and Chelmsford.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Siemens Brothers & Co., Ltd., London.

Carpet-Making Machinery—

(See also Looms.)

Craig, A. F., & Co., Ltd., Paisley.
 Crossley, John, & Co., Halifax,
 Hattersley, George, & Sons, Ltd., Keighley.

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Carpet-Making Machinery—*continued.*
 Kenworthy, Royston & Co., Huddersfield.
 Smith, William, & Brothers, Ltd., Heywood.
 Taylor, Wordsworth & Co., Leeds.

Cartridge-Making Machinery—

Greenwood & Batley, Ltd., Leeds.
 Stevenson & Co., Ltd., Preston.

Cement-Mill Plant—

Clayton, Howlett & Co., London.
 Death & Harris, Leicester.
 Fraser & Chalmers, Ltd., London.
 Hind & Lund, Ltd., Preston.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Johnson, William, & Sons, Leeds.
 Pulsometer Engineering Co., Ltd., London.
 St. George's Ironworks, Ltd., Manchester.
 Seager, L. J. & C., Dartford.
 Shepherd, Hill & Co., Ltd., Leeds.
 Waller, George, & Co., Stroud.
 Winder Brothers, Ltd., Sheffield.

Centrifugal Pumps—

(See Pumps and Pumping Engines.)

Chains—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Larmuth, Thomas, & Co., Manchester.
 West's Gas Improvement Co., Ltd., Manchester.

Charcoal-Making Plant—

Blake, Barclay & Co., Greenock.

Chemical Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne,
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Edie, Henry, & Co., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hunter & English, London.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Riley, J. F., Huddersfield
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Walker Brothers, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Cloth-Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
 Bywater, William, Leeds.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, John, & Co., Halifax.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Gadd, Thomas (Hulse & Co., Ltd. Proprietors), Manchester.
 Hacking & Co., Bury.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Nasymth, Wilson & Co., Ltd., Manchester.
 Riley, J. H., & Co., Bury.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Smith, William, & Brothers, Ltd., Heywood.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Taylor, Wordsworth & Co., Leeds.
 Thomson, Son & Co., Dundee.
 Tomlinson, G. W., Huddersfield.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Chilled and Grain Rolls—

(See Rolls and Rolling Plant.)

Chucks—

Birch, G., & Co., Manchester.
 Holyrod, John, & Co., Ltd., Rochdale.
 Pratt, F., & Co., Ltd., Halifax.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Wade, Josiah, Ltd., Halifax.

Cloth-Raising Machinery—

Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.

Clutches—Friction—

(See Friction Clutches.)

Coal and Coke Breakers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Blake, Barclay & Co., Greenock.

Coal and Coke Breakers—continued.

Dickinson, John, & Co., Keighley.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Ryder, William, Bolton.
 Speck & Thomas, Bradford.
 Thwaites Brothers, Ltd., Bradford.
 Waller, George, & Co., Stroud.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Winder Brothers, Ltd., Sheffield.

Coal Drills and Cutters—

(See Rock Drills.)

Coal Hoists—

Bennis, Edward, & Co., Ltd., Bolton.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Goodwin, Arnold, & Son, London.
 Haigh, W. B., & Co., Oldham.
 Kincaid, John G., & Co., Greenock.
 Qualter, Hall & Co., Barnsley.
 Stevenson & Co., Ltd., Preston.
 Turner & Co., London.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

Coal-Screening and Washing Plant—

Bradley, R., & Co., Wakefield.
 Qualter, Hall & Co., Barnsley.
 West's Gas Improvement Co., Ltd.,
 Manchester.
 Wood & Gee, Wigan.

Cocks—

(See Valves, Cocks, etc.; also Engine and Boiler Fittings.)

Cocoa and Coffee Machinery—

Abernethy, James, & Co., Aberdeen.
 Kenworthy, Royston & Co., Huddersfield.
 Perkin & Co., Ltd., Leeds.
 Wailes, George, & Co., London.

Cogging Mills—

(See Rolls and Rolling-Mill Plant.)

Coke Breakers—

(See Coal and Coke Breakers.)

Coke Ovens—

Ashmore, Benson, Pease & Co., Ltd.
 Stockton-on-Tees.

Colliery Plant—

(See Mining Machinery.)

Concrete-Mixing Plant—

(See also Mortar Mills.)

Douglas Forge Co., Ltd., Wigan.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Stothert & Pitt, Ltd., Bath.
 Waller, George, & Co., Stroud.

Condensing and Cooling Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Manchester.
 Brownett, Lindley & Co., Ltd., Patrixcroft.
 Caird & Rayner, London.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Hanna, Donald & Wilson, Paisley.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Kirkaldy, John, Ltd., London.
 Ledward, T., & Co., London and Manchester.

Condensing and Cooling Plant—cont.

Manlove, Alliott & Co., Ltd., Nottingham.
 Milne, James, & Son, Ltd., Edinburgh.
 North-Eastern Marine Engineering Co., Ltd., Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Saxon, George, Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thomson, Son & Co., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wailes, George, & Co., London.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Contractors' Plant—

Berry, John, Halifax.
 Booth, Joseph, & Brothers, Leeds.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Crook, Thomas T., Bolton.
 Dean, Smith & Grace, Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Glover, M., & Co., Leeds.
 Henderson, John M., Aberdeen.
 Hudswell, Clarke & Co., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Ward & Haggas, Keighley.

Conveyors and Elevators—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blake, Barclay & Co., Greenock.

Conveyors and Elevators—continued.

Booth, Joseph, & Brothers, Leeds.
 Calvert & Co., Huddersfield.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Cran, John, & Co., Leith.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Hind & Lund, Ltd., Preston.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Johnson, William, & Son, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Qualter, Hall & Co., Barnsley.
 Pickering's, Ltd., Stockton-on-Tees.
 Pullan & Mann, Leeds.
 Stevenson & Co., Ltd., Preston.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wood & Gee, Wigan.
 Wren, Henry, & Co., Manchester.

Copper Smelters and Refiners—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.

Coppersmiths and Braziers—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Harrison & Co., Manchester.
 Blundell's London Copper and Brass Works Co., Ltd., London.
 Caird & Rayner, London.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Feather, George R., Bolton.

Coppersmiths and Braziers—continued.

Greenock Foundry Co., Greenock.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jenkins, C., & Co., London.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pease, Rhodes & Co., Ltd., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Roger, R., & Co., Stockton-on-Tees.
 Ryder, T., & Co., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Co., Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Wailes, George, & Co., London.
 Wearmouth Foundry Co., Ltd., Sunderland.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Copper Tube Drawing Plant—

(See *Tube Drawing Plant.*)

Copper Tubes—

(See *Tubes.*)

Cord and Braid Machinery—

(See *Rope, Twine and Braid Machinery.*)

Cornish Boilers—

(See *Boilers—Steam.*)

Corn-Mill Machinery—

Foster, Joseph, & Sons, Preston.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hind & Lund, Ltd., Preston.
 Mather, Alex., & Son, Edinburgh.
 Tomlinson, James (Rochdale), Ltd., Rochdale.

Cotton-Carding Machinery—

(See *Cotton Preparing and Spinning Machinery.*)

Cotton Preparing and Spinning Machinery—

Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Bailey & Garnett, Ltd., Stalybridge.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Hacking & Co., Bury.
 Harding, Richardson, Rhodes & Co., Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.
 Mason, John, Rochdale.
 Platt Brothers & Co., Ltd., Oldham.
 Richardson, Tuer & Co., Manchester.
 Robinson, William, & Son, Oldham.
 Smith, William, & Brothers, Ltd., Heywood.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Stalybridge.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Cotton Presses—

(See *Presses—Screw and Steam Hydraulic Presses.*)

Cotton Waste, Wadding, etc., Machinery—

Ashworth, Elijah, Manchester.
 Brooks & Doxey, Ltd., Manchester.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Dykes, G. & J., Bury.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Bolton.
 Tatham, William, & Co., Rochdale.

Couplings—Railway—

Douglass Brothers, Ltd., Blaydon-on-Tyne.
Turton, George, Platts & Co., Sheffield.

Couplings—Shaft—

(See Mill Gearing, Shafting and Shaft Fittings.)

Cranes and Travellers—Steam, Hydraulic, Electric—

(See also Electric Cranes, Hydraulic Cranes and Goliath Cranes.)

Abernethy, James, & Co., Aberdeen.
Adamson, Joseph, & Co., Hyde.
Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Arrol, Sir William, & Co., Ltd., Glasgow.
Ashton, Frost & Co., Ltd., Blackburn.
Barker, John, & Sons, Ltd., Oldham.
Bennis, Edward, & Co., Ltd., Bolton.
Berry, Henry, & Co., Leeds.
Berry, John, Halifax.
Bigwood, J., & Son, Wolverhampton.
Booth, Joseph, & Brothers, Leeds.
Bridges, Thomas, & Sons, Wolverhampton.
Brightside Foundry Co., Ltd., Sheffield.
Broadbent, Thomas, & Sons, Ltd., Huddersfield.
Brown Brothers & Co., Ltd., Edinburgh.
Calvert & Co., Huddersfield.
Carrick & Ritchie, Edinburgh.
Carrick & Wardale, Gateshead-on-Tyne.
Chaplin, Alex., & Co., Glasgow.
Clark, Bunnett & Co., Ltd., London.
Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
Clark, J. & T., Bradford.
Clyne, Mitchell & Co., Aberdeen.
Coates, Victor, & Co., Ltd., Belfast.
Cowans, Sheldon & Co., Ltd., Carlisle.
Craig, A. F., & Co., Ltd., Paisley.
Craven Brothers, Ltd., Manchester.

Cranes and Travellers—Steam, Hydraulic, Electric—continued.

Crompton & Co., Ltd., London and Chelmsford.
Davis & Primrose, Leith.
Dickinson, John, & Co., Keighley.
Dougill, Alf., & Co., Ltd., Leeds.
Dryden, Thomas, Preston.
Easton, Anderson & Goliuen, Ltd., Erith.
Fielding & Platt, Gloucester.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Galloways, Ltd., Manchester.
Goodwin, Arnold, & Son, London.
Grieve, John, & Co., Motherwell.
Hanna, Donald & Wilson, Paisley.
Henderson, John M., Aberdeen.
Hetherington, John, & Sons, Ltd., Manchester.
Hick, Hargreaves & Co., Ltd., Bolton.
Higginbottom & Mannock, Manchester.
Holmes, J. H., & Co., Newcastle-on-Tyne.
Hulse & Co., Ltd., Manchester.
Hunter & English, London.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Johnson & Phillips, Old Charlton.
Kincaid, John G., & Co., Greenock.
Larmuth, Thomas, & Co., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Marshall, Fleming & Jack, Motherwell.
Mavor & Coulson, Ltd., Glasgow.
Middleton, Robert, Leeds.
Moreland, Richard, & Son, Ltd., London.
Musgrave Brothers, Leeds.
Napier Brothers, Ltd., Glasgow.
Nasmyth, Wilson & Co., Ltd., Manchester.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Pickering, Ltd., Stockton-on-Tees.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Rice & Co., Leeds.
Richmond, Joseph, & Co., Ltd., London.
Riley, J. F., Huddersfield.
Roger, R., & Co., Stockton-on-Tees.
Ross, R. G., & Son, Glasgow.
Russell, George, & Co., Motherwell.
Russell, S., & Sons, Leicester.
St. George's Ironworks, Ltd., Manchester.

**Cranes and Travellers—Steam,
Hydraulic, Electric—continued.**

Schofield & Taylor, Huddersfield.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Shanks, Thomas, & Co., Johnstone.
 Siemens Brothers & Co., Ltd., London.
 Smith, Hugh, & Co., Glasgow.
 Smith, John, Keighley.
 Smith, Thomas, Leeds.
 Southgate Engineering Co., Ltd.,
 New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stoerhert & Pitt, Ltd., Bath.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor & Hubbard, Leicester.
 Umpherson & Co., Ltd., Leith.
 Vaughan & Son, Manchester.
 Waygood, R., & Co., Ltd., London.
 Whitaker, C., & Co., Bradford.
 Wood, John & Edward, Bolton.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Crank Axles—

Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Newcastle-on-Tyne and
 Manchester.
 Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Ince Forge Co., Wigan.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Rogerson, John, & Co., Ltd., Wols-
 ingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Spencer, John, & Sons, Ltd., New-
 castle-on-Tyne.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 White, W. B., Colne.
 Woodhouse & Rixson, Sheffield.

Crank Shafts—

(See also Shafting—Marine; and
 Forgings.)

Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Manchester and New-
 castle-on-Tyne.
 Bigwood, J., & Son, Wolverhampton.
 Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Brown, John, & Co., Ltd., Sheffield.
 Calvert & Co., Huddersfield.
 Cammell, Charles, & Co., Ltd., Shef-
 field.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Central Marine Engine Works, West
 Hartlepool.
 Clark, George, Ltd., Sunderland.
 Crow, Harvey & Co., Glasgow.
 Darlington Forge Co., Ltd., Darling-
 ton.
 Dickinson, John, & Sons, Ltd., Sun-
 derland.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co.,
 Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Hawthorn, R. & W., Leslie & Co.,
 Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Man-
 chester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 M'Kie & Baxter, Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Ramage & Ferguson, Ltd., Leith.
 Richardson, Thomas, & Sons, Ltd.,
 Hartlepool.
 Rogerson, John, & Co., Ltd., Wols-
 ingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.

Crank Shafts—*continued.*

Scott & Hodgson, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Strang, Joseph, Ltd., Ramshbottom.
 Urnson & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Sheffield.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Wood, John & Edward, Bolton.
 Woodhouse & Rixson, Sheffield.

Creosoting Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pearn, Frank, & Co., Ltd., Manchester.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Waller, George, & Co., Stroud.

Crucibles—

Oxley Brothers, Ltd., Sheffield.
 Walker, Eaton & Co., Sheffield.

Crushers—

See Ore-Crushing Machinery, Oil-Crushing Machinery, Coal and Coke Breakers, Seed-Crushing Machinery, Stone Breakers.

Cupolas—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Hanna, Donald & Wilson, Paisley.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stevenson & Co., Ltd., Preston.
 Thwaites Brothers, Ltd., Bradford.

Cycles and Cycle Parts—

Bradbury & Co., Ltd., Oldham.
 Campion Cycle Co., Ltd., Nottingham.
 Cook, S., & Co., Bury.
 Crowley, John, & Co., Ltd., Sheffield.
 Eclipse Machine Co., Ltd., Oldham.
 Gazelle Cycle Co., Nottingham.
 Humber & Co., Ltd., Nottingham.
 Humber, Syner & Co., Ltd., Nottingham.
 "Little John" Cycle Co., Ltd., Nottingham.
 Macgregor Cycle and Engineering Co., Ltd., Nottingham.
 New Found Cycle Components Co., Leicester.
 Raleigh Cycle Co., Ltd., Nottingham.
 Robin Hood Cycle Co., Ltd., Nottingham.
 Simpson's Lever Chain and Cycle Co., Draycott.
 Springfield Cycle Co., Ltd., Nottingham.
 Sudworth & Settle, Ltd., Nottingham.
 Trent Cycle Co., Ltd., Nottingham.
 Victor Cycle Co., Ltd. (John Jardine), Nottingham.
 Webb, R. W., Ltd., Draycott.
 Whiteley's Acme Cycle Co., Ltd., Leeds.

Cylinders for Bridge Foundations—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Eltringham, J. T., & Co., South Shields.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Pease, Rhodes & Co., Ltd., Bradford.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Thornton & Crebbin, Bradford.

Cylinders for Gas and Air—

Lees, Anderson & Co., Glasgow.
 Pope, W., & Son, Ltd., London.

Dairy Machinery—

Bradford, T., & Co., Manchester.
 Milne, James, & Son, Ltd., Edinburgh.

Derrick Cranes—*(See Cranes.)***Desiccators—**

Farmer, Sir James, & Sons, Ltd.,
Manchester.
Manlove, Alliott & Co., Ltd., Not-
tingham.

Destructors—Refuse—

Adamson, Daniel, & Co., Dukinfield.
Manlove, Alliott & Co., Ltd., Not-
tingham.
Meldrum Brothers, Manchester.

Diggers—Steam—*(See Excavators—Steam.)***Disintegrators and Pulverizers**

Barry, Henry, & Co., Ltd., Aberdeen.
Fraser & Chalmers, Ltd., London.
Good & Menzies, Ltd., Hull.
Greenwood & Batley, Ltd., Leeds.
Harpers, Ltd., Aberdeen.
Harrison & Hammond, Wakefield.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Middleton, Robert, Leeds.
Qualter, Hall & Co., Barnsley.
Rose, Downs & Thompson, Ltd.,
Hull.
Strang, Joseph, Ltd., Ramsbottom.

Distilling Apparatus—Water—*(See also Oil Distilling Plant.)*

Burnet, Lindsay, & Co., Glasgow.
Caird & Rayner, London.
Chaplin, Alex., & Co., Glasgow.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Holliday, Read, & Sons, Ltd., Hud-
dersfield.
Normandy's Patent Marine Ærated
Fresh Water Co., Ltd., London.
Pease, Rhodes & Co., Ltd., Leeds.
Weir, G. & J., Ltd., Glasgow.

Distilling Plant—*(See Brewery and Distilling Plant.)***Diving Apparatus—**

Pulsometer Engineering Co., Ltd.
London.
Siebe, Gorman & Co., London.

Donkey Boilers—*(See Boilers—Steam.)***Dredgers and Dredge Plant—**

Amos & Smith, Hull.
Drysdale & Co., Glasgow.
Fleming & Ferguson, Ltd., Paisley.
Gwynne & Co., London.
Hunter & English, London.
Jackson, P. R., & Co., Ltd., Man-
chester.
Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Rose, Downs & Thompson, Ltd.,
Hull.
Simons, William, & Co., Ltd., Ren-
frew.
Stewart, John, & Son, Ltd., London.
Vickers, Sons & Maximi, Ltd., Bar-
row-in-Furness.

Drilling Machines—*(See also Radial Drills, Boring and Tapping Machines.)*

Armstrong, Sir W. G., Whitworth
& Co., Ltd., Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby
Bridge.
Bolton Engineering Co., Bolton.
Buckton, Joshua, & Co., Ltd., Leeds.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crookes, Roberts & Co., Sheffield.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.

Drilling Machines—continued.

Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Siemens Brothers & Co., Ltd., London.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stirke, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Driving Engines—

(See also High-Speed Engines, Locomotives, Marine Engines, Portable Engines, Rolling-Mill Engines, Traction Engines, Tramway Engines.)

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Browett, Lindley & Co., Ltd., Patricroft.
 Buckley & Taylor, Oldham.

Driving Engines—continued.

Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Combe, Barbour & Combe, Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Donkin, Bryan, & Co., Ltd., London.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Gimsons, Ltd., Stalybridge.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Haswell, J. Stenson, & Co., Leicester.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brothers, Bolton.
 Jessop & Appleby Brothers (London and Leicester), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kie & Baxter, Glasgow.

Driving Engines—continued.

M'Laren, J. & H., Leeds.
 McNaught, John & William, Rochdale.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mann & Charlesworth, Leeds.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Owen, Brazil & Holborow, Bristol.
 Perkin & Co., Ltd., Leeds.
 Pope, W., & Son, Ltd., London.
 Pullan & Mann, Leeds.
 Rawlinsons, Ltd (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ross & Duncan, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Thwaites Brothers, Ltd., Bradford.
 Umpherston & Co., Ltd., Leith.
 Urnson & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.

Driving Engines—continued.

Walker Brothers, Wigan.
 Walker, James, & Son, Edinburgh.
 Waller, George & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Dry Dock Proprietors—

Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Central Marine Engine Works, West Hartlepool.
 Deptford Dry Docks Co., Ltd., London.
 Fletcher, Son & Fearnall, Ltd., London.
 Glengall Iron Works, Ltd., London.
 Green, R. & H., Ltd., London.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Laird Brothers, Birkenhead.
 London Craving Dock Co., Ltd., London.
 Menzies & Co., Ltd., Leith.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Readhead, John, & Sons, South Shields.
 Rodger, A., & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Stewart, John, & Sons, Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd. Newcastle-on-Tyne.

Drying Apparatus—

Blake, Barclay & Co., Greenock.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Holden & Brooke, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jefferson, Joseph, & Brothers, Bradford.
 McNaught, John & William, Rochdale.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Petrie, John, Jun., Ltd., Rochdale.
 Riley, J. H., & Co., Bury.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Wordsworth & Co., Leeds.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

Duplex Pumps—

(See Pumps.)

Dyeing Machinery—

(See also Bleaching Machinery.)

Bentley & Jackson, Ltd., Bury.
 Berry, John, Halifax.
 Calvert & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Downham, J., & Co., Bury.
 Dykes, G. & J., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Huddersfield.
 Kilburn, R., & Sons, Leeds.
 Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Robinson, Joseph & Co., Manchester.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Walker, Samuel, Manchester.
 Whiteley, William, & Sons, Ltd., Huddersfield.

DYNAMOS AND MOTORS—

Adamson, Joseph, & Co., Hyde.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Company, Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stephens, Smith & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.

Economisers—Fuel—

Bennis, Edward, & Co., Ltd., Bolton.
 Donkin, Bryan, & Co., Ltd., London.
 Green, E., & Sons, Ltd., Wakefield.
 Meldrum Brothers, Manchester.

Ejectors—

Bailey, W. H., & Co., Ltd., Manchester.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Lancaster & Tonge, Ltd., Manchester.
 Ledward, T., & Co., London and Manchester.
 Madan, Charles S., & Co., Manchester.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Electrical Engineers and Contractors—

Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Allen, W. H., Sons, & Co., Bedford.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London.
 Bennis, Edward, & Co., Ltd., Bolton.
 Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Clift, E. H., London.
 Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.

**Electrical Engineers and Contractors
—continued.**

Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 Mavor & Coulson, Ltd., Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Newton's Electrical Co., Ltd., Taunton Oldham, Alex., & Sons, Dukinfield.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.
 Tate, James, Bradford.
 Thwaites Brothers, Ltd., Bradford.

Electric Batteries—

Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Bells and Signals—

Blackburn, Joseph, Nottingham.
 Broadbent, T. W., Huddersfield.
 Charlesworth, S., & Co., Oldham.
 General Electric Co., Ltd., Manchester.
 Haswell, J. Stenson, & Co., Leicester.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Mechan & Sons, Glasgow.
 Siemens Brothers & Co., Ltd., London.
 Sykes, Alfred, Huddersfield.
 Tate, James, Bradford.

Electric Cables and Wiring—

(See **Cables—Electric Lighting, Telegraph, Telephone.**)

Electric Cranes—

Adamson, Joseph, & Co., Hyde.
 Ashton, Frost & Co., Ltd., Blackburn.
 Berry, Henry, & Co., Leeds.
 Booth, Joseph, & Brothers, Leeds.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Carrick & Ritchie, Edinburgh.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Crompton & Co., Ltd., London and Chelmsford.
 Dougill, Alf., & Co., Ltd., Leeds.
 Edmondson, John A., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Grieve, John, & Co., Motherwell.
 Hall, J. P., & Co., Oldham.
 Henderson, John M., Aberdeen.
 Higginbottom & Mannock, Manchester.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton
 Leeds Engineering and Hydraulic Co., Leeds.
 Marshall, Fleming & Jack, Motherwell.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stephens, Smith & Co., Ltd., London.
 Stothert & Pitt, Ltd., Bath.
 Tate, James, Bradford.
 Vaughan & Son, Manchester.
 Whitaker, C., & Co., Bradford.

Electric Drillers—For Metal and Stone—

Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mavor & Coulson, Ltd., Glasgow.
 Muir, Wm., & Co., Ltd., Manchester.
 Parker, Thomas, Ltd., Wolverhampton.
 Rosling & Appleby, Bradford.
 Siemens Brothers & Co., Ltd., London.

Electric Dynamos—

(See **DYNAMOS AND MOTORS.**)

Electric Heating Appliances—

Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.

Electric Hoists—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barker, John, & Sons, Ltd., Oldham.
 Clark, Bennett & Co., Ltd., London.
 Crompton & Co., Ltd., London and Chelmsford.
 Dougill, Alf., & Co., Leeds.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Hall, J. P., & Co., Ltd., Oldham.
 Hartnell, Wilson, Leeds.
 Higginbottom & Mannock, Manchester.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Richmond, Joseph, & Co., Ltd., London.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Light Plant and Fittings(See also **DYNAMOS.**)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Ltd., Blackburn.
 Bennis, Edward, & Co., Ltd., Bolton.
 Broadbent, T. W., Huddersfield.
 Burnet, Lindsay, & Co., Glasgow.
 Callender's Cable and Construction Co., Ltd., London.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 General Electric Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Haswell, J. Stenson, & Co., Leicester.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Keighley Electrical Engineering Co., Ltd., Keighley.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Newton's Electrical Co., Ltd., Taunton.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Parker, Thomas, Ltd., Wolverhampton.
 Parsons, C. A., & Co., Newcastle-on-Tyne.

Electric Light Plant and Fittings—cont.

Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rosling & Appleby, Bradford.
 Royce, F. H., & Co., Ltd., Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Sykes, Alfred, Huddersfield.
 Thornycroft, John I., & Co., London.
 Thwaites Brothers, Ltd., Bradford.

Electric Measuring Instruments

Crompton & Co., Ltd., London and Chelmsford.
 General Electric Co., Ltd., Manchester.
 Hodges & Todd, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Meters—

Ferranti, S. Z. De, Ltd., Hollinwood.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Electric Motors—(See **DYNAMOS and MOTORS.**)**Electric Plating and Depositing Plant—**

Crompton & Co., Ltd., London and Chelmsford.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Pumping Machinery—

Ashton, Frost & Co., Ltd., Blackburn.
 Bailey, W. H., & Co., Ltd., Manchester.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Evans, Joseph, & Sons, Wolverhampton.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Rosling & Appleby, Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Thwaites Brothers, Ltd., Bradford.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

**Electric Switch-Boards and Switches—
continued.**

Hodges & Todd, London.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Siemens Brothers & Co., Ltd., London.

Electric Traction Plant—

Crompton & Co., Ltd., London and Chelmsford.
 Davy Brothers, Ltd., Sheffield.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edmondson, John A., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. P., & Co., Oldham.
 Henley's, W. T., Telegraph Works Co., Ltd., London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Johnson & Phillips, Old Charlton.
 M'Laren, J. & H., Leeds.
 Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Parker, Thomas, Ltd., Wolverhampton.
 Phoenix Dynamo Manufacturing Co., Bradford.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.
 Stead Brothers, Halifax.
 Stephens, Smith & Co., Ltd., London.

Electric Search-Lights—

(See Search-Light Projectors.)

Electric Switch - Boards and Switches—

Crompton & Co., Ltd., London and Chelmsford.
 Edmondson, John A., Leeds.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hartnell, Wilson, Leeds.

Electric Transformers—

Crompton & Co., Ltd., London and Chelmsford.
 Ferranti, S. Z. De, Ltd., Hollinwood.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Johnson & Phillips, Old Charlton.

Electric Transformers—continued.

Mavor & Coulson, Ltd., Glasgow.
 Newton's Electrical Co., Ltd., Taunton.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Siemens Brothers & Co., Ltd., London.

Electric Winches and Windlasses—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mavor & Coulson, Ltd., Glasgow.
 Parker, Thomas, Ltd., Wolverhampton.
 Rosling & Appleby, Bradford.
 Siemens Brothers & Co., Ltd., London.

Elevators and Conveyors—for Coal, Grain, Ore, etc.—

(See also Conveyors and Elevators; Coal Hoists, Grain Hoists and Hoisting Machinery.)

Elevators—Passenger—

(See also Electric Hoists, Hydraulic Hoists and Hoisting Machinery.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Easton, Anderson & Goolden, Ltd., Erith.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Turner & Co., Ltd., London.
 Wren, Henry, & Co., Manchester.

Emery, Emery Wheels, etc.—

Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.

Emery Grinding Machinery—

Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dronfield Brothers, Ltd., Oldham.
 Glover, M., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Urmson & Thompson, Oldham.
 Winder Brothers, Ltd., Sheffield.

Engine and Boiler Fittings—

(See also Indicators, Governors, Lubricators, Valves, Cocks, etc.)

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bigwood, J., & Son, Wolverhampton.
 Billington & Newton, Longport.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Degrance & Co., London.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eastwood, Walter, Ashton-under-Lyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Frost & Sons, London.
 Galloway, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gresham & Craven, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Kincaid, John G., & Co., Greenock.

Engine and Boiler Fittings—*continued.*

Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Saxon, George, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor, Robert, & Sons, Huddersfield.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Engineers' Machine Tools—*(See Machine Tools.)***Engines—**

(See Air - Compressing Engines, Blowing Engines, High-Speed Engines, Driving Engines, Haulage Machinery, Locomotives, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.)

Evaporators—

Blake, Barclay & Co., Greenock.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Central Marine Engine Works, West Hartlepool.
 Clarke, George, Ltd., Sunderland.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Kirkaldy, John, Ltd., London.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Normandy's Patent Marine Aerated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Stevenson & Co., Ltd., Preston.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.

Excavators—Steam—

Chaplin, Alex., & Co., Glasgow.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Rose, Downs & Thompson, Ltd., Hull.
 Stewart, John, & Son, Ltd., London.

Exhausters—*(See Blowers and Exhausters.)***Expansion Rings—**

Bolton Iron and Steel Co., Ltd., Bolton.

Explosives—Machinery for Making—

Aitchison & Co., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Greenwood & Batley, Ltd., Leeds.
 Hall, J. & E., Ltd., Dartford.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kincaid, John G., & Co., Greenock.
 Stevenson & Co., Ltd., Preston.
 Tatham, William, & Co., Rochdale.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Umpherston & Co., Ltd., Leith.

Extractors—

(See Hydro Extractors, Oil Extractors.)

Fans and Blowers—

Allen, W. H., Sons & Co., Bedford.
 Alley & Maclellan, Glasgow.
 Appleyard, Joseph, Bradford.
 Bailey & Garnett, Ltd., Stalybridge.
 Bradley, R., & Co., Wakefield.
 Brierley, Thomas, & Co., Oldham.
 Bumsted & Chandler, Huddersfield.
 Campbell & Calderwood, Paisley.
 Crompton & Co., Ltd., London and Chelmsford.
 Daglish, Robert, & Co., St. Helens.
 Davis & Co., Ltd., London.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Larmuth, Thomas, & Co., Manchester.
 M'Kie & Baxter, Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 Marsden, John, & Son, Liverpool.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Siemens Brothers & Co., Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Walker Brothers, Wigan.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Worsley Mesnes Iron Works Co., Wigan.

Feed-Check Valves—

Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carruthers, J. H., & Co., Glasgow.
 Carter, James, & Sons, Stalybridge.
 Cockburn, David, Glasgow.
 Dcwrance & Co., London.
 Easton, Anderson & Goolden, Ltd., Erith.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Galloways, Ltd., Manchester.
 Hall, John, & Son, Oldham.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Oldham Boiler Works Co., Ltd., Oldham.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Schofield & Taylor, Huddersfield.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Thornycroft, John I., & Co., London.
 Turnbull, Alexander, & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Feed-Water Filters—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pulsometer Engineering Co., Ltd., London.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Feed-Water Heaters—

Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Burnet, Lindsay, & Co., Glasgow.
 Caird & Rayner, London.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Cole, T. & W., London.
 Crook, Thomas T., Bolton.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Normandy's Patent Marine Aerated Fresh Water Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Schofield & Taylor, Huddersfield.
 Storey, Isaac, & Sons, Manchester.
 Thornton & Crebbin, Bradford.
 Turnbull, Alexander, & Co., Glasgow.
 Wailes, George, & Co., London.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Feed-Water Pumps—*(See Pumps.)***Feed-Water Regulators—***(See Feed Check Valves.)***Felt Machinery—**

Bywater, William, Leeds.
 Ritchie, Hart & Co., Ltd., Belfast.
 Taylor, Wordsworth & Co., Leeds.

Fencing and Railings—Iron—

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Tonkinson, Henry, & Sons, Sunderland.

File Cutting and Grinding Machinery—

Foster, Joseph, & Sons, Preston.
 Greenwood & Batley, Ltd., Leeds.
 Oxley Brothers, Ltd., Sheffield.

File Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Turton, George, Platts & Co., Sheffield.

Filtering Apparatus—

Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., London.
 Blake, Barclay & Co., Greenock.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenock Foundry Co., Greenock.
 Haigh, W. B., & Co., Oldham.
 Holliday, Read, & Sons, Ltd., Huddersfield.
 Kerr, Stuart & Co. Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Kirkaldy, John, Ltd., London.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Masson, Scott & Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pulsometer Engineering Co., Ltd., London.
 Rose, Downs & Thompson, Ltd., Hull.

Filtering Apparatus—continued.

Strang, Joseph, Ltd., Ramsbottom.
Thwaites Brothers, Ltd., Bradford.
Turnbull, Alexander, & Co., Glasgow.
Watson, Henry, & Sons, Newcastle-on-Tyne.

Filter Presses—

Ashton, Frost & Co., Ltd., Blackburn.
Crow, Harvey & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Fawcett, Preston & Co., Ltd., Liverpool.
Gimson & Co. (Leicester), Ltd., Leicester.
Greenwood & Batley, Ltd., Leeds.
Holliday, Read, & Sons, Ltd., Huddersfield.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Nottingham.
Rose, Downs & Thompson, Ltd., Hull.
Strang, Joseph, Ltd., Ramsbottom.

Filters—

(See Filtering Apparatus, Feed-Water Filters, Oil Filters.)

Fire Bars—

Adamson, Daniel, & Co., Dukinfield.
Aitchison & Co., Edinburgh.
Bennis, Edward, & Co., Ltd., Bolton.
Black, William, South Shields.
Brightside Foundry Co., Ltd., Sheffield.
Burnet, Lindsay, & Co., Glasgow.
Carter, James, & Sons, Stalybridge.
Central Marine Engine Works, West Hartlepool.
Cran, John, & Co., Leith.
Death & Harris, Leicester.
Douglas Forge Co., Ltd., Wigan.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Edie, Henry, & Co., London.
Fraser, Douglas, & Sons, Arbroath.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.

Fire Bars—continued.

Galloways, Ltd., Manchester.
Gimson & Co. (Leicester), Ltd., Leicester.
Ginman & Son, Plumstead.
Haigh, W. B., & Co., Oldham.
Hall, John, & Son, Oldham.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Ltd., Leith.
Heald, John, Chorley.
Henderson, D. & W., & Co., Glasgow.
Jones, John, & Sons, Liverpool.
Kincaid, John G., & Co., Greenock.
Meldrum Brothers, Manchester.
Musgrave, John, & Son, Ltd., Bolton.
North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
Oldham Boiler Works Co., Ltd., Oldham.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd., Hartlepool.
Richardson, Tuer & Co., Manchester.
Stevenson & Co., Ltd., Preston.
Stewart, John, & Son, Ltd., London.
Strang, Joseph, Ltd., Ramsbottom.
White, W. B., Colne.
Wilkinson, Wm., & Co., Ltd., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Yates & Thom, Blackburn.

Fire - Extinguishing Appliances—

Beck & Co., Ltd., London.
Blundell's London Copper and Brass Works, Ltd., London.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Lambeth Brass and Iron Co., Ltd., London.
Stone, J., & Co., London.
Walker, Samuel, Manchester.
Woods, Hamilton, & Co., Ltd., Manchester.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Firewood-Making Machinery—

Glover, M., & Co., Leeds.

Flanged Plates for Boilers, Locomotives, etc.—

Adamson, Daniel, & Co., Dukinfield.
 Adamson, Joseph, & Co., Hyde.
 Beeley, Thomas, Hyde.
 Brown, John, & Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 McLaren, J. & H., Leeds.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.

Flanging Machines—

Arrol, Sir William, & Co., Ltd.,
 Glasgow.
 Bennie, James, & Sons, Glasgow.
 Berry, Henry, & Co., Leeds.
 Craig & Donald, Johnstone.
 Crow, Harvey & Co., Glasgow.
 Fielding & Platt, Ltd., Gloucester.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Flannelette - Finishing Machinery—

Bentley & Jackson, Ltd., Bury.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Man-
 chester.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Jackson & Brother, Bolton.
 Kenworthy, Royston & Co., Hudders-
 field.
 Riley, J. H., & Co., Bury.
 Walker, Samuel, Manchester.

Flax, Hemp and Jute Machinery—

Combe, Barbour & Combe, Ltd.,
 Belfast.
 Cotton, Stephen, & Co., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Curtis, Sons & Co., Manchester.

Flax, Hemp and Jute Machinery— *continued.*

Fairbairn, Naylor, Macpherson & Co.,
 Ltd., Leeds.
 Fraser, Douglas, & Sons, Arbroath.
 Hacking & Co., Bury.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Horner, George, Belfast.
 Houston & Hamilton, Belfast.
 Lawson, Samuel, & Sons, Leeds.
 Lee, Croll & Co., Lochee.
 Low, James F., & Co., Monifieth.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Parker, Charles, Sons & Co., Dundee.
 Robertson & Orchar, Ltd., Dundee.
 Taylor, Wordsworth & Co., Leeds.
 Thomson, Son & Co., Dundee.
 Urquhart, Lindsay & Co., Dundee.

Floor-Cloth Machinery—

(See Linoleum Machinery, also Floor
 Cloths, under Printing Machinery.)

Flour-Mill Machinery—

Foster, Joseph, & Sons, Preston.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hind & Lund, Ltd., Preston.
 Mather, Alex., & Son, Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Tomlinson, James (Rochdale), Ltd.,
 Rochdale.

Fly Wheels—

(See Mill Gearing, Shafting and Shaft
 Fittings.)

Folding or Plaiting Machinery—

Butterworth & Dickinson, Burnley.
 Foster, Joseph, & Sons, Preston.
 Hacking & Co., Bury.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Riley, J. H., & Co., Bury.
 White, W. B., Colne.

Forced and Induced Draught Apparatus—

Alley & Maclellan, Glasgow.
 Bennis, Edward, & Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Bumsted & Chandler, Huddersfield.
 Burnet, Lindsay, & Co., Glasgow.
 Donkin, Bryan, & Co., Ltd., London.
 Drysdale & Co., Glasgow.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, John, & Son, London.
 Galloways, Ltd., Manchester.
 Greenock Foundry Co., Greenock.
 Gwynne & Co., London.
 Haigh, W. B., & Co., Oldham.
 Hanna, Donald & Wilson, Paisley.
 Howden, James, & Co., Glasgow.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Ledward, T., & Co., London and Manchester.
 M'Kie & Baxter, Glasgow.
 Meldrum Brothers, Manchester.
 Redpath & Paris, London.
 Thwaites Brothers, Ltd., Bradford.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Forges—Portable—

(See Hearths—Portable.)

Forging Presses and Plant—

(See also Hammers—Steam.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davis & Primrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Middleton, Robert, Leeds.
 Rice & Co., Leeds.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Saxon, George, Manchester.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, Hugh, & Co., Glasgow.
 Thwaites Brothers, Ltd., Bradford.

Forgings—Iron and Steel—

(See also Anchors, Shafting—Marine, Crank Shafts.)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Darlington Forge Co., Ltd., Darlington.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenock Foundry Co., Greenock.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Kirkstall Forge Co., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Reay & Usher, Sunderland.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Schofield & Taylor, Huddersfield.
 Spencer, John, & Sons, Ltd., castle-on-Tyne.
 Strang, Joseph, Ltd., Rams

Forgings—Iron and Steel—*continued.*

Sunderland Forge and Engineering Co., Ltd., Sunderland.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Walker Brothers, Wigan.
 White, W. B., Colne.
 Woodhouse & Rixson, Sheffield.

Founders—

(See Aluminium Founders, Brass and Bronze Founders, Iron and Steel Founders.)

Foundry Plant and Appliances—

(See Cupolas, Cranes, Crucibles, Sand-Moulding Machines, Wheel-Moulding Machines.)

Friction Clutches—

Blackburn, George, & Sons, Ltd., Nottingham.
 Bradley, R., & Co., Wakefield.
 Daglish, Robert, & Co., St. Helens.
 Dryden, Thomas, Preston.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser & Chalmers, Ltd., London.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Harpers, Ltd., Aberdeen.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Moore & Korte, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nottingham Engineering Co., Ltd., Nottingham.
 Pope, W., & Son, Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Riley, J. H., & Co., Bury.
 Stead Brothers, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.

Furnace Blowing Engines and Plant—

(See Blowing Engines and Plant.)

Furnaces—Boiler—

(See Boiler Furnaces.)

Furnaces—Smelting, Annealing, Case-hardening, etc.—

Fletcher Brothers, Ashton-under-Lyne.
 Fraser & Chalmers, Ltd., London.
 Hamer, S. H., Halifax.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Galvanising Plant—

Bigwood, J., & Sons, Wolverhampton.
 Bridges, Thomas, & Sons, Wolverhampton.

Gas Compressors—

(See Air-Compressors.)

Gas Cylinders—

(See Cylinders for Gas and Air.)

Gas Engines—

Andrew, J. E. H., & Co., Ltd., Reddish.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dewhurst, C. H., Keighley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dykes, G. & J., Bury.
 Fielding & Platt, Ltd., Gloucester.
 Furnival & Co., Manchester.
 Green, Thomas, & Son, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hill, F. J., Leicester.

Gas Engines—continued.

Keighley Engineering Co., Keighley.
 National Gas Engine Co., Ltd., Ashton-under-Lyne.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Spetch & Thomas, Bradford.
 Unbreakable Pulley and Mill-gearing Co., Ltd., Manchester.

Gas Exhausters—

(See **Blowers and Exhausters.**)

Gas Holders—

(See **Gas Works Plant.**)

Gas Meters—

Milne, James, & Son, Ltd., Edinburgh.

Gas Pipes—

(See **Pipes.**)

Gas Producers—

Calvert & Co., Huddersfield.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser, John, & Son, London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Pope, W., & Son, Ltd., London.
 Stevenson & Co., Ltd., Preston.
 West's Gas Improvement Co., Ltd., Manchester.

Gas Works Plant—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Gas Works Plant—continued.

Clayton, Son & Co., Ltd., Leeds.
 Craig, A. F., & Co., Ltd., Paisley.
 Donkin, Bryan, & Co., Ltd., London.
 Douglas Forge Co., Ltd., Wigan.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Harrison & Hammond, Wakefield.
 Hunter & English, London.
 M'Kinnon, William, & Co., Aberdeen.
 Mechan & Sons, Glasgow.
 Meldrum Brothers, Manchester.
 Milne, James, & Son, Ltd., Edinburgh.
 Pope, W., & Son, Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Wailes, George, & Co., London.
 Waller, George, & Co., Stroud.
 West's Gas Improvement Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gauge Cocks—

(See **Valves and Cocks.**)

Gauges—Pressure—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carter, James, & Son, Stalybridge.
 Degrave & Co., London.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Storey, Isaac, & Sons, Manchester.

Gauges—Water—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Carter, James, & Sons, Stalybridge.
 Dewrance & Co., London.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Gear Cutting Machines—

(See Wheel-Cutting Machines.)

Gearing—Mill—

(See Mill Gearing and Shafting.)

Gear Wheels—

(See Mill Gearing, Shafting and Shaft Fittings.)

Girders—Built and Rolled—

(See Bridges, Roofs, and Structural Iron and Steel Work.)

Glass-Working Plant—

Daglish, Robert, & Co., St. Helens.
 Entwistle & Gass, Ltd., Bolton.
 Greenwood & Batley, Ltd., Leeds.
 Stevenson & Co. Ltd., Preston.

Gold Crushing and Amalgamating Machinery—

Brightside Foundry Co., Ltd., Sheffield.
 Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser & Chalmers, Ltd., London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.

Goliath and Titan Cranes—

Carrick & Ritchie, Edinburgh.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Booth, Joseph, & Brothers, Leeds.
 Henderson, John M., Aberdeen.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Smith, Thomas, Leeds.
 Stothert & Pitt, Ltd., Bath.

Governors—Stationary Engine—

Arundel & Co., Stockport.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co. Ltd., Patricroft.
 Carmichael, James, & Co., Ltd., Dundee.
 Evans, Joseph, & Sons, Wolverhampton.
 Galloways, Ltd., Manchester.
 Hall, J. P., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 M'Laren, J. & H., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ranisbottom.
 Storey, Isaac, & Sons, Manchester.
 Whitley Partners, Leeds.
 Wood, John & Edward, Bolton.

Governors—Marine Engine—**Grabs—***(See Dredgers and Dredge Plant.)***Grain Hoists—**

Bennis, Edward & Co., Ltd., Bolton.
 Fraser & Chalmers, Ltd., London.
 Haigh, W. B., & Co., Oldham.
 Hind & Lund, Ltd., Preston.
 Milne, James, & Son, Ltd., Edinburgh.
 Rose, Downs & Thompson, Ltd., Hull.
 Stevenson & Co., Ltd., Preston.

Granite-Working Machinery—*(See Stone-Working Machinery.)***Graving Dock Proprietors—***(See Dry-Dock Proprietors.)***Grinding Mills—**

Barry, Henry, & Co., Ltd., Aberdeen.
 Berry, John, Halifax.
 Charlesworth, S., & Co., Oldham.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Daglish, Robert, & Co., St. Helens.
 Douglas Forge Co., Ltd., Wigan.
 Fraser & Chalmers, Ltd., London.
 Good & Menzies, Ltd., Hull.
 Henderson, John M., Aberdeen.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Mann, G., & Co., Leeds.
 Middleton, Robert, Leeds.
 Oxley Brothers, Ltd., Sheffield.
 Pullan & Mann, Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.
 Stevenson & Co., Ltd., Preston.

Grinding and Polishing Machinery—*(See also Emery-Grinding Machinery.)*

Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Dronsfield Brothers, Ltd., Oldham.
 Glover, M., & Co., Leeds.
 Henderson, John M., Aberdeen.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Luke & Spencer, Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Urmson & Thompson, Oldham.
 White, W. B., Colne.
 Winder Brothers, Ltd., Sheffield.

Guillotines— for Paper Cutting—*(See Bookbinders' Machinery.)***Gun-Making Machinery—***(See Ordnance Machinery and Small Arms Machinery.)***Gunpowder, etc., Machinery—***(See Explosives—Machinery for Making.)***Guns, Gun Carriages and Mountings—***(See Ordnance—Makers of.)***Guttapercha Machinery—***(See Rubber Mill Machinery.)*

Hammers—Steam and Pneumatic—

Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Brightside Foundry Co., Ltd., Sheffield.
 Clarke, T. A. W., Leicester.
 Crow, Harvey & Co., Glasgow.
 Davis & Primrose, Leith.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hulse & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Pratt F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Thwaites Brothers, Ltd., Manchester.
 Urmsom & Thompson, Oldham.
 Walker Brothers, Wigan.
 Worsley Mesnes Iron Works Co., Wigan.

Haulage Machinery and Appliances—

Ashton, Frost & Co., Ltd., Blackburn.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.
 Chaplin, Alex., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Douglas Forge Co., Ltd., Wigan.
 Fleming & Ferguson, Ltd., Paisley.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Lancaster & Tonge, Ltd., Manchester.

**Haulage Machinery and Appliances—
continued.**

Leeds Engineering and Hydraulic Co., Leeds.
 Needham Brothers & Brown, Barnsley.
 Qualter, Hall & Co., Barnsley.
 Stead Brothers, Halifax.
 Walker Brothers, Wigan.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Worsley Mesnes Ironworks Co., Wigan.
 Yates & Thom, Blackburn.

Hearths—Portable—

(See also Smiths' Hearths.)

Fraser, Douglas, & Sons, Arbroath.
 Oxley Brothers, Ltd., Sheffield.
 Thwaites Brothers, Ltd., Bradford.

Heating and Ventilating Apparatus—

Ashwell & Nesbit, Ltd., London and Leicester.
 Calvert & Co., Huddersfield.
 Crumblehulme, W., & Sons, Ltd., Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hayward Brothers & Eckstein, Ltd., London.
 Ledward, T., & Co., Manchester.
 Marsden, John, & Son, Liverpool.
 Newsome, Roberts & Co., Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Turner & Co., London.
 Utley, Thomas, & Co., Liverpool.

Hemp Machinery—

(See Flax, Hemp and Jute Machinery.)

High-Speed Engines—

Adamson, Daniel, & Co., Dukinfield.
 Alley & Maclellan, Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Bumsted & Chandler, Hednesford.
 Carmichael, James, & Co., Ltd.,
 Dundee.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coulthard, T., & Co., Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd.
 Erith.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Fraser, Douglas, & Sons, Arbroath.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Gwynne & Co., London.
 Hall, J. P., & Co., Oldham.
 Howden, James, & Co., Glasgow.
 Lancaster & Tonge, Ltd., Manchester.
 M'Laren, J. & H., Leeds.
 Marshall, Sons & Co., Ltd., Gains-
 borough.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave, John, & Son, Ltd., Bolton.
 Owen, Brazil & Holborow, Bristol.
 Redpath & Paris, London.
 Riley, J. F., Huddersfield.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott, Ernest, & Mountain, Ltd.,
 Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Rams-
 bottom.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.

Hoisting Machinery—

(See also Ash Hoists, Coal Hoists,
 Electric Hoists, Grain Hoists,
 Hydraulic Hoists, Elevators, Con-
 veyors.)

Alley & Maclellan, Glasgow.
 Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd.,
 Glasgow.
 Ashwell & Nesbit, Ltd., London and
 Leicester.
 Barker, John, & Sons, Ltd., Oldham.
 Benham & Sons, Ltd., London.
 Bennis, Edward, & Co., Ltd., Bolton.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Son, Wolverhampton.
 Blake, Barclay & Co., Greenock.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edin-
 burgh.
 Calvert & Co., Huddersfield.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Clarke, Chapman & Co., Ltd., Gates-
 head-on-Tyne.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Daglish, Robert, & Co., St. Helens.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Gadd, Thomas (Hulse & Co., Ltd.,
 Proprietors), Manchester.
 Gimson & Co. (Leicester), Ltd.,
 Leicester.
 Good & Menzies, Ltd., Hull.
 Greenwood & Batley, Ltd., Leeds.
 Grieve, John, & Co., Motherwell.
 Haigh, W. B., & Co., Oldham.
 Hartnell, Wilson, Leeds.
 Henderson, John M., Aberdeen.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Higginbottom & Mannock, Man-
 chester.

Hoisting Machinery—*continued.*

Hind & Lund, Ltd., Preston.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Larmuth, Thomas, & Co., Manchester.
 Lee, Croll & Co., Lochee.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Mavor & Coulson, Ltd., Glasgow.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Pickering's, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. F., Huddersfield.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Ross, R. G., & Son, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Siemens Brothers & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Taylor & Hubbard, Leicester.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Waller, George, & Co., Stroud.
 Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 West's Gas Improvement Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hosiery Machinery—

Blackburn, George, & Sons, Ltd., Nottingham.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hague, B., & Co., Nottingham.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hosiery Machine Building Co., Nottingham.
 Kiddier Brothers, Nottingham.
 Kiddier, J., & Son, Nottingham.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Pegg, Samuel, & Son, Leicester.
 Taylor, Wordsworth & Co., Leeds.
 Wren, Henry, & Co., Manchester.

Hydraulic Accumulators—

(See *Hydraulic Machinery and Appliances.*)

Hydraulic Bending Machines—

(See *Bending Machines and Rolls.*)

Hydraulic Capstans—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Carrick & Wardale, Gateshead-on-Tyne.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Hydraulic Cranes—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Booth, Joseph, & Brothers, Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Campbell & Calderwood, Paisley.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bennett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullarton, Hodgart & Barclay, Ltd., Paisley.
 Grieve, John, & Co., Motherwell.
 Hanna, Donald & Wilson, Paisley.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Middleton, Robert, Leeds.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Stothert & Pitt, Ltd., Bath.
 Whitaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Flangers—

(See Flanging Machines.)

Hydraulic Hoists—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London and Leicester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Barker, John, & Sons, Ltd., Oldham.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clark, Bennett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craig, A. F., & Co., Ltd., Paisley.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fullerton, Ho'gارت & Barclay, Ltd., Paisley.
 Goodwin, Arnold, & Son, London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Higginbottom & Mannock, Manchester.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 Mathews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Musgrave Brothers, Leeds.
 Olroyd, Edwin, & Co., Ltd., Leeds.
 Pickering's, Ltd., Stockton-on-Tees.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Smith, Thomas, Leeds.
 Stevenson & Co., Ltd., Preston.
 Thomson, Son & Co., Dundee.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Whittaker, C., & Co., Bradford.
 Wren, Henry, & Co., Manchester.

Hydraulic Jacks—

Adamson, Daniel, & Co., Dukinfield.
 Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Hydraulic Machinery and Appliances—

See also Hydraulic Cranes, Hydra. Capstans, Hydra. Hoists, Hydra. Jacks, Hydra. Presses, Hydra. Pumps, Hydra. Rivetters.

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashwell & Nesbit, Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clark, Bunnett & Co., Ltd., London.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Craven Brothers, Ltd., Manchester.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Dougill, Alf, & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Eltringham, J. T., & Co., South Shields.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Galloways, Ltd., Manchester.

**Hydraulic Machinery and Appliances
—continued.**

Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Hathorn, Davey & Co., Leeds.
 Higginbottom & Mannock, Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Johnson & Phillips, Old Charlton.
 Kenworthy, Royston & Co., Huddersfield.
 Lambeth Brass and Iron Co., Ltd., London.
 Lee, Croll & Co., Lochee.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mather, Alex., & Son, Edinburgh.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pickering's, Ltd., Stockton-on-Tees.
 Pulsometer Engineering Co. Ltd., London.
 Qualter, Hall & Co., Barnsley.
 Rice & Co., Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Scriven & Co., Leeds.
 Simpson, James, & Co., Ltd., London.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Thomson, Son, & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Turner & Co., London.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.

Hydraulic Machinery and Appliances*—continued.*

- Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Ward & Haggas, Keighley.
 Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hydraulic Presses—*(See also Forging Presses and Presses—Steam and Screw.)*

- Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Armstrong Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Berry, Henry, & Co., Leeds.
 Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
 Brown Brothers & Co., Ltd., Edinburgh.
 Butterworth & Dickinson, Burnley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carruthers, J. H., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Downham, J., & Co., Bury.
 Drysdale & Co., Glasgow.
 Easton, Anderson & Goolden, Ltd., Erith.
 Eltringham, J. T., & Co., South Shields.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fraser, Douglas, & Sons, Arbroath.

Hydraulic Presses—*continued.*

- Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Good & Menzies, Ltd., Hull.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Hacking & Co., Bury.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Houston & Hamilton, Belfast.
 Hoyle, Elkannah, & Sons, Ltd., Halifax.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Royston & Co., Huddersfield.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Moreland, Richard, & Son, Ltd., London.
 Muir, Wm., & Co., Ltd., Manchester.
 Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Perkin & Co., Ltd., Leeds.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richmond, Joseph, & Co., Ltd., London.
 Riley, J. H., & Co., Bury.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.
 St. George's Ironworks, Ltd., Manchester.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Stead Brothers, Halifax.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Umpherston & Co., Ltd., Leith.
 Walker, Samuel, Manchester.
 Ward & Haggas, Keighley.

Hydraulic Presses—continued.

Waygood, R., & Co., Ltd., London.
 West End Engine Works Co., Edinburgh.
 White, W. B., Colne.
 Whitaker, C., & Co., Bradford.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wren, Henry, & Co., Manchester.

Hydraulic Pumps—

(See Pumps and Pumping Engines.)

Hydraulic Punching Machines—

(See Punching and Shearing Machines.)

Hydraulic Rams—

(See Hydraulic Machinery and Appliances.)

Hydraulic Riveting Machines—

(See also Riveting Machines.)

Arrol, Sir William, & Co., Ltd., Glasgow.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Crow, Harvey & Co., Glasgow.
 Fielding & Platt, Gloucester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Muir, Wm., & Co., Ltd., Manchester.
 Musgrave Brothers, Leeds.
 Rice & Co., Leeds.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.

Hydraulic Valves—

(See Sluice-Valves, Cocks and Hydrants; also Valves and Cocks.)

Hydro Extractors—

Blake, Barclay & Co., Greenock.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Crossley, John, & Co., Halifax.
 Campbell & Calderwood, Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Larmuth, Thomas, & Co., Manchester.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Riley, J. H., & Co., Bury.
 Urmson & Thompson, Oldham.

Hydrokineters—

Lees, Anderson & Co., Glasgow.
 Weir, G. & J., Ltd., Glasgow.

Ice-Making and Refrigerating Machinery—

(See also Refrigerating Machinery.)

Cole, T. & W., London.
 Hall, J. & E., Ltd., Dartford.
 Pulsometer Engineering Co., Ltd., London.

India-Rubber Making Machinery—

(See Rubber-Mill Machinery.)

Indicators—Engine—

Arundel & Co., Stockport.
 Bailey, W. H., & Co., Ltd., Manchester.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Storey, Isaac, & Sons, Manchester.

Ingots—

Brightside Foundry Co., Ltd., Sheffield.
 Denison, Samuel, & Son, Leeds.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Oxley Brothers, Ltd., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Pease, Rhodes & Co., Ltd., Bradford.
 Winder Brothers, Ltd., Sheffield.

Ingots—

Bolton Iron and Steel Co., Ltd., Bolton.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Jackson, P. R., & Co., Ltd., Manchester.
 Fox, Samuel, & Co., Sheffield.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Injectors—

Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Dewrance & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Holden & Brooke, Ltd., Manchester.
 Lancaster & Tonge, Ltd., Manchester.
 Madan, Charles S., & Co., Manchester.
 Merchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pope, W., & Son, Ltd., London.

Iron and Steel forgings—

(See *Forgings—Iron and Steel.*)

Iron and Steel Founders—**Iron Founders—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Allsup & Co., Ltd., Preston.
 Arundel & Co., Stockport.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Ashton, Frost & Co., Blackburn.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Bailey & Garnett, Ltd., Stalybridge.
 Barraclough, Joseph, & Sons, Barnsley.
 Barrett, R., & Son, Ltd., London.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Berry, John, Halifax.
 Bigwood, J., & Sons, Wolverhampton.
 Black, William, South Shields.
 Blair & Co., Ltd., Stockton-on-Tees.
 Booth, Joseph, & Brothers, Leeds.
 Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Calvert, T. C., Sunderland.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carter, James, & Sons, Stalybridge.
 Central Marine Engine Works, West Hartlepool.
 Chadwick, James, Bolton.
 Chapman, Carverhill & Co., Newcastle-on-Tyne.
 Clark, J. & T., Bradford.
 Clark, T. A. W., Leicester.
 Clayton, Howlett & Co., London.
 Coates, Victor, & Co., Ltd., Belfast.
 Cochran & Co., Birkenhead.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Crook, Thomas T., Bolton.
 Crossley George, Ltd., Cleckheaton.

Iron and Steel Founders—cont.**Iron Founders—continued.**

Crumblehulme, W., & Sons, Ltd., Bolton.
 Daglish, Robert, & Co., St Helens.
 Darling & Sellers, Ltd., Keighley.
 Death & Harris, Leicester.
 Denison, Samuel, & Son, Leeds.
 Dickinson, John, & Co., Keighley.
 Donkin, Bryan, & Co., Ltd., London.
 Douglas Forge Co., Ltd., Wigan.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Dykes, G. & J., Bury.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd., Erith.
 Edie, Henry, & Co., London.
 Ellis, J. C. & J. S., Ltd., Sheffield.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fowler, John, Sheffield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Son, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Ginman & Son, Plumstead.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Gregg, W., Sons & Phoenix, Belfast.
 Haigh, John, & Sons, Ltd., Huddersfield.
 Haley, E. & W. H., Bradford.
 Hall, John, & Son, Oldham.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Haxby & Sewells, Halifax.
 Hayward Brothers & Eckstein, Ltd., London.
 Heald, John, Chorley.
 Henderson, D. & W., & Co., Glasgow.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hind & Lund, Ltd., Preston.
 Hodge, Samuel, & Sons, Ltd., London.
 Hodgson, H. E., & Co., Cleckheaton.
 Houston & Hamilton, Belfast.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.

Iron Founders—continued.

Hunter & English, London.
 Jackson & Brother, Bolton.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Johnson, William, & Sons, Leeds.
 Jones, John, & Sons, Liverpool.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Lambeth Brass and Iron Co., Ltd., London.
 Leach & Co., Rochdale.
 Lee, Croll & Co., Lochee.
 Livesey, Henry, Ltd., Blackburn.
 Low, James F., & Co., Monifieth.
 M'Kinnon, Williani, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marsden, John, & Son, Liverpool.
 Mather, Alex., & Son, Edinburgh.
 Mellor, Moses, & Sons, Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Moore, James, & Son, Ltd., Belfast.
 Morley, Y. H., Halifax.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Noble & Lund, Felling-on-Tyne.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Oldham Boiler Works Co., Ltd., Oldham.
 Oxley Brothers, Ltd., Sheffield.
 Oxley, George, & Sons, Sheffield.
 Parker, Charles, Sons & Co., Dundee.
 Parkinson, J., Shipley.
 Pease, Rhodes & Co., Ltd., Bradford.
 Petrie, John, Jun., Ltd., Rochdale.
 Pickup & Kelly, Darwen.
 Pilling, John, & Sons, Ltd., Colne.
 Qualter, Hall & Co., Barnsley.
 Rankin & Blackmore, Greenock.
 Ratcliff, J., & Sons, Leeds.
 Redpath & Paris, London.
 Reynolds, James, & Co., Belfast.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Tuer & Co., Manchester.
 Richards, W., & Son, Leicester.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robinson, Joseph, & Co., Manchester.
 Roger, R., & Co., Stockton-on-Tees.
 Rose, Downs & Thompson, Ltd., Hull.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.

Iron and Steel Founders - cont.**Iron Founders—continued.**

Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Shorrock, J. & R. Darwen.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, G. F., Halifax.
 Spencer, John, & Co., Keighley.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son, Ltd., London.
 Stirk, John, & Sons, Halifax.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Thompson, J. W., Sunderland.
 Thomson, Son & Co., Dundee.
 Thornton & Crebbin, Bradford.
 Tomlinson, G. W., Huddersfield.
 Tonkinson, H., & Sons, Sunderland.
 Urmon & Thompson, Oldham.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wailes, George, & Co., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wallis Brothers, Sunderland.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Walmsley, Charles, & Co., Ltd., Bury.
 Waterson, H. J., & Co., Sunderland.
 Wearmouth Foundry Co., Ltd., The, Sunderland.
 Wheatley & Taylor, South Shields.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Wilkinson, G., & Sons, Keighley.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Winder Brothers, Ltd., Sheffield.
 Wood & Gee, Wigan.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Wood, J. & E., Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Iron Founders—continued.

Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Iron and Steel Founders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Crowley, John, & Co., Ltd., Sheffield.
 Dearne & Dove Steel Co., Ltd., Barnsley.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jopling, E., & Sons, Sunderland.
 Musgrave, John, & Son, Ltd., Bolton.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Wells, Jonas, Keighley.

Steel Founders—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darlington.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.
 Rogerson, John, & Co., Ltd., Walsingham.
 Turton, George, Platts & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield.

Iron and Steel Plates and Bars—

(See Steel and Iron Plates and Bars.)

Iron and Steel Works Plant—

(See Steel and Iron Works Plant;
 also under Machine Tools, Rolls
 and Rolling Mill Plant.)

Ironwork—Constructional—

(See Bridges, Roofs, and Constructional Iron and Steel Work.)

Jacks - Lifting —

(See Hydraulic Jacks, Screw Jacks, Ship Jacks—Hydraulic.)

Jacquard Card-Cutting Punching Machinery—

Ayrton, William, & Co., Manchester.
Benson, William, Nottingham.

Jacquard Looms and Machinery

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
Crossley, John, & Co., Halifax.
Hacking & Co., Bury.
Hattersley, George, & Sons, Ltd., Keighley.
Richardson, Tuer & Co., Manchester.
White, W. B., Colne.

Jet Apparatus—

Gresham & Craven, Ltd., Manchester.
Ledward, T., & Co., London and Manchester.
Lees, Anderson & Co., Glasgow.
Meldrum Brothers, Manchester.

Joggling Machines—for Ship Plating and Frames—

Doxford, W., & Sons, Ltd., Sunderland.
Leeds Engineering and Hydraulic Co., Leeds.
Russell & Co., Port-Glasgow.
Smith Brothers & Co., Glasgow.
Smith, Hugh, & Co., Glasgow.

Joiners, Saw-Millers and Patternmakers—

Calvert & Co., Huddersfield.
Gibson, J., & Co., Leeds.
Gregson & Co., London.
Johnson, Thomas, & Co., London.
Robertson, A. W., London.
Scott & Co., Greenock.

Jute Machinery—

(See Flax, Hemp and Jute Machinery.)

Key-Seating Machines—

Butler & Co., Halifax.
Harpers, Ltd., Aberdeen.
Smith & Coventry, Ltd., Manchester.
Spencer, John, & Co., Keighley.
Ward & Haggas, Keighley.

Kilns—

Blake, Barclay & Co., Greenock.
Craig, A. F., & Co., Ltd., Paisley.
Johnson, William, & Sons, Leeds.
Mather, Alex., & Son, Edinburgh.
Milne, James, & Son, Ltd., Edinburgh.
Pullan & Mann, Leeds.
West's Gas Improvement Co., Ltd., Manchester.

Kitchen Ranges—

Ashwell & Nesbit, Ltd., London and Leicester.
Chadwick, James, Bolton.
Crumblehulme, W., & Sons, Ltd., Bolton.
Tonkinson, Henry, & Sons, Sunderland.

Kneading and Mixing Machines

(See Mixing and Kneading Machines.)

Knitting Machines—

Eclipse Machine Co., Ltd., Oldham.
Holroyd, John, & Co., Ltd., Rochdale.
Mellor, Moses, & Sons, Ltd., Nottingham.

Lace Machinery—

Cooke, W., Nottingham.
 Hosiery Machine Building Co., Nottingham.
 Jardine, John, Nottingham.

Lancashire Boilers—

(See **Boilers—Steam.**)

Lathes—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckley, William, & Co., Sheffield.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hartley, Binns & Co., Halifax.
 Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hudson, Hall & Griffith, Keighley.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Lang, John, & Sons, Johnstone.
 Loudon Brothers, Johnstone.
 M'Dowall, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford,
 Mudd, W. R., & Co., Leicester.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.

Lathes—continued.

Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scott Brothers, Halifax.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stell, Stephen, Keighley.
 Stirke, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 White, Thomas, & Sons, Paisley.
 White, W. B., Colne.
 Wilkinson, G., & Sons, Keighley.

Launches and Yachts—as a Specialty—

(See also **Shipbuilders and Repairers.**)

Barclay, Curle & Co., Ltd., Glasgow.
 Cochran & Co., Birkenhead.
 Cran, John, & Co., Leith.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lobnitz & Co., Ltd., Renfrew.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Menzies & Co., Ltd., Leith.
 Ramage & Ferguson, Ltd., Leith.
 Renoldson, J. P., & Sons, South Shields.
 Robertson, A. W., & Co., London.
 Scott, John, & Co., Kinghorn.
 Scott & Co., Greenock.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

**Launches and Yachts—as a Specialty—
*continued.***

Stewart, John, & Son, Ltd., London.
Thornycroft, John I., & Co., London.
Vauxhall Ironworks Co., Ltd., London.
Vickers, Sons, & Maxim, Ltd., Sheffield.
Yarrow & Co., Ltd., London.

**Leather-Working Machinery—
*continued.***

Larmuth, Thomas, & Co., Manchester.
Pearson & Bennion, Ltd., Leicester.
Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
Wright, B. & D., Leeds.

Laundry Machinery—

Appleyard, Joseph, Bradford.
Ashwell & Nesbit, Ltd., London and Leicester.
Benham & Sons, Ltd., London.
Bradford, T., & Co., Manchester.
Broadbent, Thomas, & Sons, Ltd., Huddersfield.
Clayton, Howlett & Co., London.
Fraser, John, & Son, London.
Hall, J. & E., Ltd., Dartford.
Haswell, J. Stenson, & Co., Leicester.
M'Kinnon, William, & Co., Aberdeen.
Manlove, Allott & Co., Ltd., Nottingham.
Urnison & Thompson, Oldham.
White, W. B., Colne.

Lenses and Mirrors—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.

Lifting Jacks—

(See Hydraulic Jacks; Screw Jacks; Ship Jacks—Hydraulic.)

Lifts and Hoists—

(See Hoisting Machinery, Ash Hoists, Coal Hoists, Electric Hoists, Hydraulic Hoists, Elevators and Conveyors.)

Lead-Mining Machinery—

(See Mining Machinery.)

Lead (Sheet and Pipe) Machinery—

Loudon Brothers, Johnstone.
Strang, Joseph, Ltd., Ramsbottom.

Light-Draught Steamers—as a Specialty—

(See also Shipbuilders and Repairers.)

Alley & Maclellan, Glasgow.
Barclay, Curle & Co., Ltd., Glasgow.
Bow, M'Lachlan & Co., Paisley.
Croom & Arthur, Leith.
Cran, John, & Co., Leith.
Fleming & Ferguson, Ltd., Paisley.
Hanna, Donald & Wilson, Paisley.
Henderson, D. & W., & Co., Glasgow.
Inglis, A. & J., Glasgow.
Jones, John, & Co., Liverpool.
Kincaid, John G., & Co., Greenock.
Lobnitz & Co., Ltd., Renfrew.
Lytham Shipbuilding Co., Lytham.
Scott & Co., Greenock.
Smith, A. & D., & Co., London.
Stewart, John, & Son, Ltd., London.
Summers & Scott, Gloucester.
Thornycroft, John I., & Co., London.
Vauxhall Ironworks Co., Ltd., London.
Yarrow & Co., Ltd., London.

Leather-Belt Machinery—

Appleyard, Joseph, Bradford.
Greenwood & Batley, Ltd., Leeds.
Pearson & Bennion, Ltd., Leicester.

Leather-Working Machinery—

Crossley, George, & Co., Ltd., Cleckheaton.
Greenwood & Batley, Ltd., Leeds.
Gimson & Co. (Leicester), Ltd., Leicester.

Lightning Conductors—

Bailey, W. H., & Co., Ltd., Manchester.
 Broadbent, T. W., Huddersfield.
 Dougill, Alf., & Co., Ltd., Leeds.
 Frost & Sons, London.
 Johnson & Phillips, Old Charlton.
 Milne, James, & Son, Ltd., Edinburgh.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Siemens Brothers & Co., Ltd., London.

Lithographic Printing Machinery—

(See *Printing Machinery*.)

Lithographic Stone Grinding Machinery—

Charlesworth, S., & Co., Oldham.
 Greenwood & Batley, Ltd., Leeds.
 Henderson, John M., Aberdeen.
 Ratcliffe, J., & Sons, Leeds.

Locomotives—

Beyer, Peacock & Co., Ltd., Manchester.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dubs & Co., Glasgow.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hudswell, Clarke & Co., Leeds.
 Hunslet Engine Co., Leeds.
 Johnson & Phillips, Old Charlton.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kitson & Co., Leeds.
 Manning, Wardle & Co., Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Peckett & Sons, Bristol.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Walker Brothers, Wigan.

Locomotive Mountings—

Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Chapman & Furneaux, Gateshead-on-Tyne.
 Dewrance & Co., London.
 Dubs & Co., Glasgow.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Gresham & Craven, Ltd., Manchester.
 Lambeth Brass and Iron Co., Ltd., London.
 Madan, Charles S., & Co., Manchester.

Light-Railway Plant—

Fielding & Platt, Ltd., Gloucester.
 Green, Thomas, & Son, Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Leeds Forge Co., Ltd., Leeds.
 Mechan & Sons, Glasgow.
 Turton, George, Platts & Co., Sheffield.

Linenette-Finishing Machinery

Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Kenworthy, Royston & Co., Huddersfield.
 Riley, J. H., & Co., Bury.
 Walker, Samuel, Manchester.

Linoleum Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
 Bertrams, Ltd., Edinburgh.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Masson, Scott & Co., Ltd., London.
 Mather, Alex., & Son, Edinburgh.
 Milne, James, & Son, Ltd., Edinburgh.
 Strang, Joseph, Ltd., Ramsbottom.
 Summers & Scott, Gloucester.
 West End Engine Works Co., Edinburgh.

Locomotive Mountings—continued.

Marchant, G. M., Huddersfield.
 Morton & Edwards, Stalybridge.
 Moorhouse, Sydney, & Co., Stalybridge.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Looms—

Atherton Brothers, Ltd., Preston.
 Blackburn Loom and Weaving Machinery Making Co., (William Dickinson & Sons), Ltd., Blackburn.
 Butterworth & Dickinson, Burnley.
 Clarke, T. A. W., Leicester.
 Cooper Brothers, Ltd., Burnley.
 Craig, A. F., & Co., Ltd., Paisley.
 Fraser, Douglas, & Sons, Arbroath.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hacking & Co., Bury.
 Hattersley, G., & Sons, Ltd., Keighley.
 Hutchinson, Hollingworth & Co., Ltd., Debdon and Halifax.
 Jackson & Brother, Bolton.
 Keighley, George, Burnley.
 Larmuth, Thomas, & Co., Manchester.
 Leach & Co., Rochdale.
 Livesey, Henry, Ltd., Blackburn.
 Parker, Charles, Sons & Co., Dundee.
 Pemberton & Co., Burnley.
 Pilling, John, & Sons, Ltd., Colne.
 Platt Brothers & Co., Ltd., Oldham.
 Richardson, Tuer & Co., Manchester.
 Robertson & Orchar, Ltd., Dundee.
 Scriven & Co., Leeds.
 Shorrock, J. & R., Darwen.
 Smith, William, & Brothers, Ltd., Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Taylor, Thomas, Leicester.
 Thonison, Son & Co., Dundee.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 White, W. B., Colne.

Lubricators (Sight-Feed) and Lubricating Cups—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Bailey, W. H., & Co., Ltd., Manchester.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Dewart & Co., London.
 Donkin, Bryan, & Co., Ltd., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Oldham, Alexander, & Sons, Dukinfield.
 Saxon, George, Manchester.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Machine Tools—

See also Sections underlined:—

Bending Roll's and Machines.
Bevelling Machines.
Boring and Tapping Machines.
Drilling Machines.
Electric Drillers.
Flanging Machines.
Forging Presses.
Grinding and Polishing Machinery.
Hammers—Steam.
Hydraulic Rivetters.
Joggling Machines.
Key-Seating Machines.
Lathes.
Milling Machines.
Multiple Drilling Machines.
Multiple Punching Machines.
Planing Machines.
Punching and Shearing Machines.
Radial Drills.
Rivetting Machines.
Saws for Metals.
Screwing Machines.
Shearing Machines.
Slotting and Shaping Machines.
Wheel Cutting Machines.
Wood Working Machinery.

For Engineering Shops—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth Co., Ltd., Manchester.

Machine Tools—continued.**For Engineering Shops—continued.**

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Beyer, Peacock & Co., Ltd., Manchester.
 Bigwood, J., & Son, Wolverhampton.
 Binns Brothers, Halifax.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Bradbury & Co., Ltd., Oldham.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells and Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Croft & Naylor, Keighley.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Darling & Sellers, Ltd., Keighley.
 Davis, A. J., Leicester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edwards, George, & Co., Johnstone.
 Fairbairn, Naylor, Macpherson & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Fraser, Douglas, & Sons, Arbroath.
 Galloways, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Harvey, G. & A., Glasgow.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hudson, Hall & Griffith, Keighley.
 Hulse & Co., Ltd., Manchester.
 Keighley Engineering Co., Keighley.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Lang, John, & Sons, Johnstone.
 Loudon Brothers, Johnstone.
 M'Dowall, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Maud & Turner, Halifax.
 Mercer, Edward, Manchester.
 Midgeley & Sutcliffe, Bradford.
 Mudd, W. R., & Co., Leicester.
 Muir, Wm., & Co., Ltd., Manchester.

For Engineering Shops—continued.

Musgrave Brothers, Leeds.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Parkinson, J., Shipley.
 Pegg, Samuel, & Son, Leicester.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Ross, R. G., & Son, Glasgow.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart, & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Stell, Stephen, Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Iron and Steel Works—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Bennie, Janies, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Davy Brothers, Ltd., Sheffield.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.

Machine Tools—continued.**For Iron and Steel Works—continued.**

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Sharp, Stewart & Co., Ltd., Glasgow.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.

For Ship, Boiler and Bridge Builders—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Son, Sowerby Bridge.
 Berry, Henry, & Co., Leeds.
 Binns Brothers, Halifax.
 Butler, J., & Co., Halifax.
 Cameron, John, Manchester.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crossley & Co., Johnstone.
 Crow, Harvey & Co., Glasgow.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hamer, S. H., Halifax.
 Hanna, Donald & Wilson, Paisley.
 Hartley, Binns & Co., Halifax.

For Ship, Boiler and Bridge Builders—continued.

Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Rice & Co., Leeds.
 Ross, R. G., & Son, Glasgow.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Smith, Hugh, & Co., Glasgow.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Son, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

For Tin, Zinc and Sheet-Iron Workers—

Bigwood, J., & Son, Wolverhampton.
 Blackburn & Crawshaw, Wakefield.
 Bradley, R., & Co., Wakefield.
 Smith, Daniel, & Co., Wolverhampton.

Machinists—

(See Agricultural Machinery, Bread and Biscuit Machinery, Dairy Machinery, Dyeing and Bleaching Machinery, Laundry Machinery, Paper-Making Machinery, Textile Machinery.)

Marine Engineers and Boiler-makers—

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Blair & Co., Ltd., Stockton-on-Tees.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George Ltd., Sunderland.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Clyne, Mitchell & Co., Aberdeen.
 Cochran & Co., Birkenhead
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Doxford, W., & Sons, Ltd., Sunderland.
 Dunlop, David J., & Co., Port-Glasgow.
 Dunsuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fisher & Co., Paisley.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Greenock Foundry Co., Greenock.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Harrison Engine Co., Ltd., Manchester.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.

**Marine Engineers and Boilermakers
—continued.**

Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Humphrys, Tennant & Co., London.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lewis, John, & Sons, Aberdeen.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and Iron Shipbuilding Co., Ltd., Glasgow.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Maudslay, Sons & Field, Ltd., London.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Muir & Houston, Glasgow.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Penn, John, & Son, Ltd., London.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Rankin & Blackmore, Greenock.
 Readhead, John, & Sons, South Shields.
 Reid, Thomas, & Sons, Paisley.
 Rennie, G., & Co., London.
 Rennoldson, J. P., & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Richardson, Wigham, & Co., Newcastle-on-Tyne.
 Robertson, A. W., & Co., London.
 Ross & Duncan, Glasgow.
 Rowan, David, & Son, Glasgow.
 Scott, John, & Co., Kinghorn.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.
 Simons, William, & Co., Ltd., Renfrew.
 Smith, A. & D., & Co., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Thornycroft, John I., & Co., London,

Marine Engineers and Bollermakers
—continued.

Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.
 Wilkinson, William, & Co., Ltd., Wigan.
 Workman, Clark & Co., Ltd., Belfast.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yarrow & Co., Ltd., London.

Marine Shafting—(See **Shafting—Marine, Crank Shafts.**)**Matchmaking Plant—**

Summers & Scott, Gloucester.

Mechanical Stokers—

Arrol, Sir William, & Co., Ltd., Glasgow.
 Bennis, Edward, & Co., Ltd., London.
 Haigh, W. B., & Co., Oldham.
 Meldrum Brothers, Manchester.
 Richardson, Tuer & Co., Manchester.
 Sinclair, George, Leith.
 Urmson & Thompson, Oldham.
 West's Gas Improvement Co., Ltd., Manchester.

Metallic Packings—(See **Packings—Engine.**)**Metals—Special Alloys, Anti-friction, etc.—**

Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Bowen & Co., London.
 Bumsted & Chandler, Huddersfield.
 Dewart & Co., London.
 Edie, Henry, & Co., London.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.

Metals—Special Alloys, Antifriction, etc.—continued.

Frost & Sons, London.
 Lancaster & Tonge, Ltd., Manchester.
 Manganese Bronze and Brass Co., Ltd., London.
 Marchant, G. M., Huddersfield.
 Marsden, Ellis, Liverpool.
 Marsden, John, & Son, Liverpool.
 Morris, J., & Co., London.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Phosphor Bronze Co., Ltd., London.
 Redpath & Paris, London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wells, Jonas, Keighley.
 West, John, London.
 Whitley Partners, Leeds.
 Willianis Brothers, Sheffield.

Meters—Water, Gas, etc.—(See **Gas Meters, Electric Meters, Water Meters.**)**Mill-Gearing, Shafting and Shaft Fittings—**(See also **Wheels—Geared.**)

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Adamson, Daniel, & Co., Dukinfield.
 Allen, Edgar, & Co., Ltd., Sheffield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Ashwell & Nesbit, Ltd., London and Leicester.

Bailey & Garnett, Ltd., Stalybridge.
 Barker, John, & Sons, Ltd., Oldham.
 Barracough, Joseph, & Sons, Barnsley.
 Barry, Henry, & Co., Ltd., Aberdeen.
 Bentley & Jackson, Ltd., Bury.
 Berry, John, Halifax.
 Bertrams, Ltd., Edinburgh.
 Bigwood, J., & Son, Wolverhampton.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Blake, Barclay & Co., Greenock.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Bradley, R., & Co., Wakefield.
 Bridges, Thomas, & Sons, Wolverhampton,

Mill-Gearing, Shafting and Shaft Fittings—continued.

Broadbent, Thomas, & Sons, Ltd., Huddersfield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Butler, J., & Co., Halifax.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Calvert & Co., Huddersfield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Carter Brothers, Rochdale.
 Charlesworth, S., & Co., Oldham.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cole, T. & W., London.
 Combe, Barbour & Combe, Ltd., Belfast.
 Coulthurst, H. J. & A., Darwen.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Craven Brothers, Ltd., Manchester.
 Crook, Thomas T., Bolton.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Darlington Forge Co., Ltd., Darlington.
 Death & Harris, Leicester.
 Dickinson, John, & Co., Keighley.
 Downham, J., & Co., Bury.
 Dryden, Thomas, Preston.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fotherby & Co., Wakefield.
 Fraser & Chalmers, Ltd., London.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloway, Ltd., Manchester.
 Gimsons, Ltd., Stalybridge.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Glover, M., & Co., Leeds.
 Goodwin, Arnold, & Son, London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Harpers, Ltd., Aberdeen.

Mill-Gearing, Shafting and Shaft Fittings—continued.

Heald, John, Chorley.
 Hetherington, John, & Son, Ltd., Manchester.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Higginbottom & Mannock, Manchester.
 Hind & Lund, Ltd., Preston.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, Horsfield & Wilson, Ltd., Leeds.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hudswell, Clarke & Co., Leeds.
 Hulse & Co., Ltd., Manchester.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jardine, John, Nottingham.
 Jefferson, Joseph, & Brothers, Bradford.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Johnson, William, & Sons, Leeds.
 Kenworthy, Taylor & Co., Barnsley.
 Kirkstall Forge Co., Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Dowall, John, & Sons, Johnstone.
 M'Kinnon, William, & Co., Aberdeen.
 McNaught, John & William, Rochdale.
 M'Neil, John, & Co., Glasgow.
 Matthews, Williani, & Co., Manchester.
 Mather, Alex., & Son, Edinburgh.
 Middleton, Robert, Leeds.
 Middleton, Thomas, & Co., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Needham Brothers & Brown, Barnsley.
 New Found Cycle Components Co., Leicester.
 Noble & Lund, Felling-on-Tyne.
 Nottingham Engineering Co., Ltd., Nottingham.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Osborn, Samuel, & Co., Sheffield.
 Owen, Brazil & Holborow, Bristol.
 Pease, Rhodes & Co., Ltd., Bradford.
 Perkin & Co., Ltd., Leeds.
 Pullan & Mann, Leeds.
 Ratcliffe, J., & Sons, Leeds.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Reid, Thomas, & Sons, Paisley.
 Reynolds, James & Co., Belfast,

Mill-Gearing, Shafting and Shaft Fittings—continued.

Riley, J. F., Huddersfield.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Russell, S., & Sons, Leicester.
 St. George's Ironworks, Ltd., Manchester.
 Sagar, J., & Co., Halifax.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Scriven & Co., Leeds.
 Seager, L. J. & C., Dartford.
 Sharples, William, & Co., Ramsbottom.
 Shaw, Mark, Huddersfield.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, John, Keighley.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stirk, John, & Sons, Halifax.
 Strang, Joseph, Ltd., Ramsbottom.
 Thomson, Son & Co., Dundee.
 Umpherston & Co., Ltd., Leith.
 Unbreakable Pulley and Mill-Gearing Co., Ltd., Manchester.
 Urmsom & Thompson, Oldham.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Wainwright, Thomas, & Sons, Stalybridge.
 Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Wailes, George, & Co., London.
 Walmsley, Charles, & Co., Ltd., Bury.
 Ward & Haggas, Keighley.
 West End Engine Works Co., Edinburgh.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Whittaker, William, & Sons, Oldham.
 Winder Brothers, Ltd., Sheffield.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wright, B. & D., Leeds.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Milling Cutters—Reamers, etc.—

Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Heap, William, & Co., Ltd. Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendal & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Standard Tool Co., Sowerby Bridge.

Milling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Butler, J., & Co., Halifax.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Newcastle-on-Tyne.
 Hetherington, John & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Standard Tool Co., Sowerby Bridge.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Mining Machinery and Tools—**Coal Mining—**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.

Mining Machinery and Tools— *continued.*

Coal Mining—*continued.*

Barracough, Joseph, & Sons, Barnsley.
Bennis, Edward, & Co., Ltd., Bolton.
Bradley, R., & Co., Wakefield.
Brown Brothers & Co., Ltd., Edinburgh.
Cameron, John, Manchester.
Carrick & Wardale, Gateshead-on-Tyne.
Carruthers, J. H., & Co., Glasgow.
Daglish, Robert, & Co., St. Helens.
Davy Brothers, Ltd., Sheffield.
Death & Harris, Leicester.
Douglas Forge Co., Ltd., Wigan.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Dunston Engine Works Co., The, Dunston-on-Tyne.
Easton, Anderson & Goolden, Ltd., Erith.
Entwistle & Gass, Ltd., Bolton.
Fawcett, Preston & Co., Ltd., Liverpool.
Firth, Thomas, & Sons, Ltd., Sheffield.
Foster, Joseph, & Sons, Preston.
Fotherby & Co., Wakefield.
Fowler, John, & Co. (Leeds), Ltd., Leeds.
Fraser & Chalmers, Ltd., London.
Harrison & Hammond, Wakefield.
Hartnell, Wilson, Leeds.
Hathorn, Davey & Co., Leeds.
Heald, John, Chorley.
Henderson, John M., Aberdeen.
Jackson, P. R., & Co., Ltd., Manchester.
Jessop & Appleby Brothers (Leicester and London) Ltd., Leicester.
Jessop, Wm., & Sons, Ltd., Sheffield.
Kerr, Stuart & Co., Stoke-on-Trent.
Lancaster & Tonge, Ltd., Manchester.
Larmuth, Thomas, & Co., Manchester.
Leeds Engineering and Hydraulic Co., Leeds.
Mather, Alex., & Son, Edinburgh.
Mavor & Coulson, Ltd., Glasgow.
Moore & Korte, Leeds.
Moreland, Richard, & Son, Ltd., London.
Napier Brothers, Ltd., Glasgow.
Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Manchester.
Quarter, Hall & Co., Barnsley.
Rosling & Appleby, Bradford.
Scott & Hodgson, Manchester.
Siemens Brothers & Co., Ltd., London.

Coal Mining—*continued.*

Simpson, James, & Co., Ltd., London.
Walker Brothers, Wigan.
Wilkinson, William, & Co., Ltd., Wigan.
Wood & Gee, Wigan.
Worsley Mesnes Iron Works Co., Wigan.

Lead Mining—

Allsup & Co., Ltd., Preston.
Pulsometer Engineering Co., Ltd., London.
Shepherd, Hill & Co., Ltd., Leeds.

Mine Ventilation Plant—

Bumsted & Chandler, Hednesford.
Carrick & Wardale, Gateshead-on-Tyne.
Thwaites Brothers, Ltd., Bradford.
Walker Brothers, Wigan.

Mint Machinery—

Fletcher Brothers, Ashton-under-Lyne.
Greenwood & Batley, Ltd., Leeds.
Smith, Daniel, & Co., Wolverhampton.

Mixing and Kneading Machines

Crook, Thomas T., Bolton.
Hind & Lund, Ltd., Preston.
Johnson, William, & Sons, Leeds.
Pullan & Mann, Leeds.
Richmond & Chandler, Ltd., Manchester.

Mortar Mills—

(See also Concrete-Mixing Plant.)

Berry, John, & Co., Halifax.
Bigwood, J., & Son, Wolverhampton.
Brightside Foundry Co., Ltd., Sheffield.
Crook, Thomas T., Bolton.
Dongill, Alf., & Co., Ltd., Leeds.
Douglas Forge Co., Ltd., Wigan.
Heald, John, Chorley.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Mortar Mills—continued.

Johnson, William, & Sons, Leeds.
 Oxley Brothers, Ltd., Sheffield.
 Spencer, John, & Co., Keighley.
 Stothert & Pitt, Ltd., Bath.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.
 Waller, George, & Co., Stroud.
 Whitaker, C., & Co., Bradford.
 White, W. B., Colne.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Motor Vehicles—

Bradbury & Co., Ltd., Oldham.
 Clift, E. H., London.
 Coulthard, T., & Co., Preston.
 Dougill, Alf., & Co., Ltd., Leeds.
 Goodwin, Arnold, & Son, London.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Mann & Charlesworth, Leeds.
 Stephens, Smith & Co., Ltd., London.
 Wilkinson, Wm., & Co., Ltd., Wigan.

Moulding Machines—

(*See Sand-Moulding Machines,
 Wheel-Moulding Machines.*)

Multiple-Drilling Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.

Multiple-Drilling Machines—continued.

Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Multiple-Punching Machines—

Berry, Francis, & Sons, Sowerby Bridge.
 Craig & Donald, Johnstone.
 Fielding & Platt, Ltd., Gloucester.
 Hanna, Donald, & Wilson, Paisley.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.

Nails—

Stone, J., & Co., London.
 Williams Brothers, Sheffield.

Navvies—Steam—

(*See Excavators—Steam.*)

Needles and Wire—

Jardine, John, Nottingham.

Nuts—

(*See Bolts, Nuts, Rivets, Screws
 and Washers.*)

Oil-Cake Crushers—

Richmond & Chandler, Ltd., Manchester.

Oil-Cake Presses—

Greenwood & Batley, Ltd., Leeds.
 Manlove, Allott & Co., Ltd., Nottingham.
 Musgrave Brothers, Leeds.
 Rose, Downs & Thompson, Ltd., Hull.

Oil-Distilling Plant—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Fraser, John, & Son, London.
 M'Neil, John, & Co., Glasgow.
 Marsden, John, & Son, Liverpool.

Oil Engines—

Andrew, J. E. H., & Co., Ltd., Reddish.
 Bow, M'Lachlan, & Co., Paisley.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clarke, T. A. W., Leicester.
 Donkin, Bryan, & Co., Ltd., London.
 Dougill, Alf., & Co., Ltd., Leeds.
 Fielding & Platt, Ltd., Gloucester.
 Greenwood & Batley, Ltd., Leeds.
 National Gas Engine Co., Ltd., Ashton-under-Lyne.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Perkin & Co., Ltd., Leeds.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.

Oil Extractors—

Foster Brothers (Gloucester), Ltd., Gloucester.
 Haigh, W. B., & Co., Oldham.
 Holroyd, John, & Co., Ltd., Rochdale.
 Thornton & Crebbin, Bradford.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Waygood, R., & Co., Ltd. London.

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Oil Filters—

Bennis, Edward, & Co., Ltd., Bolton.
 Caird & Rayner, London.
 Carruthers, J. H., & Co., Glasgow.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Rose, Downs & Thompson, Ltd., Hull.
 Storey, Isaac, & Sons, Manchester.
 Watson, Henry, & Sons, Newcastle-on-Tyne.

Oil-Gas Apparatus—

Dougill, Alf., & Co., Ltd., Leeds.
 Pope, W., & Son, Ltd., London.
 Wailes, George, & Co., London.

Oil-Mill Machinery—

Greenwood & Batley, Ltd., Leeds.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Musgrave Brothers, Leeds.
 Rose, Downs & Thompson, Ltd., Hull.
 Summers & Scott, Gloucester.
 Waller, George, & Co., Stroud.

Ordnance Machinery—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Muir, Wm., & Co., Ltd., Manchester.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Southgate Engineering Co., Ltd., New Southgate, near London.
 Ward & Haggas, Keighley.

Ordnance—Makers of—

Arinstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Brown, John, & Co., Ltd., Sheffield.
 Cammiell, Charles, & Co., Ltd., Sheffield.
 Easton, Anderson & Goolden, Ltd., Erith.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Vickers, Sons & Maxim, Ltd., Sheffield and Erith.

Ore-Crushing Machinery—

Daglish, Robert, & Co., St. Helens.
 Easton, Anderson & Goolden, Ltd., Erith.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fraser & Chalmers, Ltd., London.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.

Ore-Crushing Machinery—continued.

Johnson, William, & Sons, Leeds.
 Madan, Charles S., & Co., Manchester.
 Richardson, Thomas, & Co., Ltd.,
 Hartlepool.
 Tomlinson, James (Rochdale), Ltd.,
 Rochdale.
 Winder Brothers, Ltd., London.

**Ornamental Iron-Work—Gates,
Railings, etc.—**

Bailey & Garnett, Ltd., Stalybridge.
 Crumblehulme, W., & Sons, Ltd.,
 Bolton.
 Dougill, Alf., & Co., Ltd., Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Turner & Co., London.

**Overhead Travelling Cranes—
(See Cranes.)****Packings—Engine—**

Arundel & Co., Stockport.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Goodwin, Arnold, & Son, London.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Forge Co., Ltd., Leeds.
 Morris, J., & Co., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham, Alexander, & Sons, Dukin-
 field.
 Oldham & Son, Manchester.
 Saxon, George, Manchester.
 Thomson, Son & Co., Dundee.
 Waller, George, & Co., Stroud.
 Wood, John & Edward, Bolton.

Paint-Mill Machinery—

Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Hind & Lund, Ltd., Preston.
 Johnson, William, & Sons, Leeds.
 Wailes, George, & Co., London.
 Winder Brothers, Ltd., Sheffield.

Paper-Bag Making Machinery—

Bunisted & Chandler, Hednesford.
 Milne, James, & Son, Ltd., Edinburgh.

Papermaking Machinery—

Aitchison & Co., Edinburgh.
 Bentley & Jackson, Ltd., Bury.
 Bertram, James, & Son, Ltd., Edin-
 burgh.
 Bertrans, Ltd., Edinburgh.
 Daglish, Robert, & Co., St. Helens.
 Donkin, Bryan, & Co., Ltd., London.
 Glover, M., & Co., Leeds.
 Greig, John, & Sons, Edinburgh.
 Jackson & Brother, Bolton.
 Luke & Spencer, Ltd., Manchester.
 Masson, Scott & Co., Ltd., London.
 Milne, James, & Son, Ltd., Edinburgh.
 Pickup & Kelly, Darwen.
 Shorrocks, J. & R., Darwen.
 Sinclair, George, Leith.
 Strang, Joseph, Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Walker, James, & Son, Edinburgh.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle
 on-Tyne.
 West End Engine Works Co., Edinburgh.

Pattern Makers—

Bailey & Garnett, Ltd., Stalybridge.
 Bigwood, J., & Son, Wolverhampton.
 Furness, Sir C., Westgarth & Co.
 Ltd., Middlesbrough.
 Gibson, J., & Co., Leeds.
 Greenock Foundry Co., Greenock.
 Hargreaves, Lloyd, Halifax.

Pig Iron—

Cammell, Charles, & Co., Ltd.,
 Sheffield.
 Palmer's Shipbuilding and Iron Co.
 Ltd., Jarrow-on-Tyne,

Pile Drivers—

Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Southgate Engineering Co., Ltd., New Southgate, near London.

Pipes—Copper—

Elmore's Patent Copper Depositing Co., Ltd., Leeds.
 Frost & Sons, London.

Pipes—Iron and Steel—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Berry, John, Halifax.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Craig, A. F., & Co., Ltd., Paisley.
 Frost & Sons, London.
 Haley, E. & W. H., Bradford.
 Hanna, Donald & Wilson, Paisley.
 Mechan & Son, Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.

Pistons and Piston Rings—

Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Browett, Lindley & Co., Ltd., Patricroft.
 Buckley, William, & Co., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Daglish, Robert, & Co., St. Helens.
 Edmeston, Archd., & Sons, Manchester.
 Foster, Joseph, & Sons, Preston.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Heald, John, Chorley.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jones, John, & Sons, Liverpool.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Lees, Anderson & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.

Pistons and Piston Rings—continued.

Matthews, William, & Co., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Noble & Lund, Felling-on-Tyne.
 Oldham, Alexander, & Sons, Dukinfield.
 Oldham & Son, Manchester.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Perkin & Co., Ltd., Leeds.
 Qualter, Hall & Co., Barnsley.
 Rogerson, John, & Co., Ltd., Wolsingham.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornycroft, John I., & Co., London.
 Urmson & Thompson, Oldham.
 Vauxhall Ironworks Co., Ltd., London.
 Wainwright, Thomas, & Sons, Stalybridge.
 Whitaker, C., & Co., Bradford.
 Wood, John & Edward, Bolton.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.

Planing Machines—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craven Brothers, Ltd., Manchester.
 Crookes, Roberts & Co., Sheffield.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Harvey, G. & A., Glasgow.

Planing Machines—continued.

Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Maud & Turner, Halifax.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasymth, Wilson & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Son, Halifax.
 Scott Brothers, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Smith, G. F., Halifax.
 Spencer, John, & Co., Keighley.
 Spencer, James, & Co., Manchester.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Planing Machines—Plate-Edge—

Appleyard, Joseph, Bradford.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Asquith, William, Halifax.
 Bennie, James, & Sons, Glasgow.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Craig & Donald, Johnstone.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Edwards, George, & Co., Johnstone.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Hetherington, John, & Sons, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Noble & Lund, Felling-on-Tyne.

Planing Machines—Plate-Edge—cont.

Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Hugh, & Co., Glasgow.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.

Plates—Armour—

(See Armour Plates.)

Plates—Iron and Steel—

(See Steel and Iron Plates and Bars.)

Ploughs—Steam—

Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 M'Laren, J. & H., Leeds.

Plummer Blocks and Pedestals—

(See Mill-Gearing, Shafting and
 Shaft-Gearing.)

Pneumatic Machine Tools—

De Bergue & Co., Ltd., Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Greenwood & Batley, Ltd., Leeds.
 Ross, R. G., & Son, Glasgow.

Portable Engines—

Fowler, John, & Co. (Leeds), Ltd.,
 Leeds.
 Marshall, Sons & Co., Ltd., Gainborough.
 Dougill, Alf., & Co., Ltd., Leeds.

Portable Railways and Rolling Stock—

Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
Henderson, John M., Aberdeen.
Kerr, Stuart & Co., Stoke-on-Trent.

Pottery Machines—

Kerr, Stuart & Co., Stoke-on-Trent.

Presses—Screw and Steam—

(See also **Hydraulic Presses, Filter Presses and Sludge Presses.**)

Benson, William, Nottingham.
Berry, Henry, & Co., Leeds.
Bigwood, J., & Son, Wolverhampton.
Charlesworth, S., & Co., Oldham.
Clayton, Howlett & Co., London.
Crossley, John, & Co., Halifax.
Death & Harris, Leicester.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Fawcett, Preston & Co., Ltd., Liver-
pool.
Glover, M., & Co., Leeds.
Greenwood & Batley, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kenworthy, Royston & Co., Hudders-
field.
Kincaid, John G., & Co., Greenock.
Muir, Wm., & Co., Ltd., Manchester.
Nasmyth, Wilson & Co., Ltd., Man-
chester.
Pegg, Samuel, & Son, Manchester.
Riley, J. H., & Co., Bury.
Robinson, Joseph, & Co., Manchester.
St. George's Ironworks, Ltd., Man-
chester.
Smith, Daniel, & Co., Wolverhampton.
White, W. B., Colne.

Pressure Gauges—

(See **Gauges—Pressure.**)

Printing Machinery—**Cloth—**

(Including **CALICO PRINTING.**)

Edmeston, Archd., & Sons, Man-
chester.
Entwistle & Gass, Ltd., Bolton.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Gadd, Thomas (Hulse & Co., Ltd.,
Proprietors), Manchester.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Strang, Joseph, Ltd., Ramsbottom.
Taylor, Thomas, Leicester.
Walker, Samuel, Manchester.

Floorecloths—

Bertram, James, & Son, Ltd., Edin-
burgh.
Bertranis, Ltd., Edinburgh.
Farmer, Sir James, & Sons, Ltd.,
Manchester.
Gadd, Thomas (Hulse & Co., Ltd.,
Proprietors), Manchester.
Masson, Scott & Co., Ltd., London.
Milne, James, & Son, Ltd., Edinburgh.
Strang, Joseph, Ltd., Ramsbottom.
Summers & Scott, Gloucester.
West End Engine Works Co., Edin-
burgh.

Letterpress—

Brenner Machine Co., Otley.
Charlesworth, S., & Co., Oldham.
Coulthard, T., & Co., Preston.
Dawson & Sons, Otley.
Dawson, H. & J., Bradford.
Foster, Joseph, & Sons, Preston.
Furnival & Co., Manch-ster.
Greenwood & Batley, Ltd., Leeds.
Greig, John, & Sons, Edinburgh.
Hopkinson & Cope, London.
Jardine, John, Nottingham.
Mann, G., & Co., Leeds.
Middleton, Thomas, & Co., London.
Miller & Richard, Edinburgh.
Newsum, Roberts & Co., Leeds.
Payne & Sons, Otley.
Pearson & Bennion, Ltd., Leicester.
Taylor, Thomas, Leicester.
Wade, Josiah, Halifax and Liverpool.
Wailes, George, & Co., London.

Printing Machinery—continued.**Lithographic—**

Bremner Machine Co., Otley.
 Charlesworth, S., & Co., Oldham.
 Dawson & Sons, Otley.
 Greig, John, & Sons, Edinburgh.
 Hopkinson & Cope, London.
 Mann, G., & Co., Leeds.
 Newsum, Roberts & Co., Leeds.
 Payne & Sons, Otley.
 Ratcliffe, J., & Sons, Leeds.

Wall Papers—

Edmeston, Archd., & Sons, Manchester.
 Gadd, Thomas (Hulse & Co., Ltd., Proprietors), Manchester.
 Pickup & Kelly, Darwen.
 Shorrock, J. & R., Darwen.
 Strang, Joseph, Ltd., Ramsbottom.

Projectiles—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Canniell, Charles, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.

Propellers—Air—

(See Fans and Blowers.)

Propellers and Propeller Blades—Marine—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Barclay, Curle & Co., Ltd., Glasgow.
 Billington & Newton, Longport.
 Black, William, South Shields.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Cammell, Charles, & Co., Ltd., Sheffield.

Propellers and Propeller Blades—Marine—continued.

Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Coates, Victor, & Co., Ltd., Belfast.
 Cran, John, & Co., Leith.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Greenock Foundry Co., Greenock.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 M'Kie & Baxter, Glasgow.
 Manganese Bronze and Brass Co., Ltd., London.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Phosphor Bronze Co., Ltd., London.
 Ramage & Ferguson, Ltd., Leith.
 Redpath & Paris, London.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rogerson, John, & Co., Ltd., Walsingham.
 Smith, A. & D., & Co., London.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Thorneycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., London.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.

**Propellers and Propeller Blades—
Marine—continued.**

Watson, Henry, & Sons, Newcastle-on-Tyne.
 Wearmouth Foundry Co., Ltd., Sunderland.
 Wheatley & Taylor, South Shields.
 Whitley Partners, Leeds.

Pug Mills—

Berry, John, Halifax.
 Clayton, Howlett & Co., London.
 Crook, Thomas T., Bolton.
 Farmer, Sir Janies, & Sons, Ltd., Manchester.
 Johnson, William, & Sons, Leeds.
 Pullan & Mann, Leeds.

Pulley Blocks—

Bailey, W. H., & Co., Ltd., Manchester.
 Coubro & Scrutton, London.
 Crowley, John, & Co., Ltd., Sheffield.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Goodwin, Arnold, & Son, London.
 Oxley Brothers, Ltd., Sheffield.

Pulleys — Cast and Wrought Iron—

(See Mill-Gearing, Shafting and Shaft Fittings.)

Pulverizers—

(See Disintegrators and Pulverizers.)

Pumps and Pumping Engines—**Air Pumps and Compressors.**

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Ashton, Frost & Co., Ltd., Blackburn.

Air Pumps and Compressors—continued

Bailey, W. H., & Co., Ltd., Manchester.
 Barraclough, Joseph, & Sons, Barnsley.
 Bigwood, J., & Son, Wolverhampton.
 Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Browett, Lindley & Co., Ltd., Patricroft.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carnichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Coates, Victor, & Co., Ltd., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Douglas Forge Co., Ltd., Wigan.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesb'.

Galloways, Ltd., Manchester.
 Good & Menzies, Ltd., Hull.
 Goodwin, Arnold, & Son, London.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Hanna, Donald & Wilson, Paisley.
 Heald, John, Chorley.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Lees, Anderson & Co., Glasgow.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mavor & Coulson, Ltd., Glasgow.

**Pumps and Pumping Engines—
continued.****Air Pumps and Compressors—continued.**

Middleton, Robert, Leeds.

Milne, James, & Son, Ltd., Edinburgh.

Moreland, Richard, & Son, Ltd.,
London.Nasmyth, Wilson & Co., Ltd., Man-
chester.Needham Brothers & Brown, Barnsley.
Pearn, Frank, & Co., Ltd., Man-
chester.Pulsometer Engineering Co., Ltd.,
London.Robinson, Joseph, & Co., Manchester.
St. George's Ironworks, Ltd., Man-
chester.

Schofield & Taylor, Huddersfield.

Scott, Ernest, & Mountain, Ltd., New-
castle-on-Tyne.Sharples, William, & Co., Rams-
bottom.Simpson, James, & Co., Ltd., London.
Stevenson & Co., Ltd., Preston.Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.Strang, Joseph, & Co., Ltd., Rams-
bottom.

Thwaites Brothers, Ltd., Bradford.

Umpherston & Co., Ltd., Leith.

Vauxhall Ironworks Co., Ltd., Lon-
don.

Wailes, George, & Co., London.

Walker Brothers, Wigan.

Walker, Eaton & Co., Sheffield.

Waller, George, & Co., Stroud.

Walmsley, Charles, & Co., Ltd., Bury.

Watson, Henry, & Sons, Newcastle-
on-Tyne.

Weir, G. & J., Ltd., Glasgow.

West End Engine Works Co., Edin-
burgh.

Whitaker, C., & Co., Bradford.

Wilkinson, William, & Co., Ltd.,
Wigan.

Winder Brothers, Ltd., Sheffield.

Worsley Mesnes Iron Works Co.,
Wigan.Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.

Yates & Thorn, Blackburn.

Centrifugal Pumps—

Adamson, Daniel, & Co., Dukinfield.

Amos & Smith, Hull.

Bailey, W. H., & Co., Ltd., Man-
chester.**Centrifugal Pumps—continued.**

Bow, M'Lachlan & Co., Paisley.

Bunsted & Chandler, Huddersfield.

Campbell & Calderwood, Paisley.

Carmichael, Janies, & Co., Ltd.,
Dundee.

Carruthers, J. H., & Co., Glasgow.

Coates, Victor, & Co., Ltd., Belfast.

Dougill, Alf., & Co., Ltd., Leeds.

Drysdale & Co., Glasgow.

Easton, Anderson & Goolden, Ltd.,
Erith.

Entwistle & Gass, Ltd., Bolton.

Evans, Joseph, & Sons, Wolverham-
pton.

Fraser & Chalmers, Ltd., London.

Greenock Foundry Co., Greenock.

Greenwood & Batley, Ltd., Leeds.

Günther, W., & Sons, Oldham.

Gwynne & Co., London.

Jackson & Brother, Bolton.

Jessop & Appleby Brothers (Leicester
and London), Ltd., Leicester.

Lancaster & Tonge, Ltd., Manchester.

M'Kie & Baxter, Glasgow.

Mavor & Coulson, Ltd., Glasgow.

Moreland, Richard, & Son, Ltd.,
London.Pulsometer Engineering Co., Ltd.,
London.

Redpath & Paris, London.

Riley, J. H., & Co., Bury.

Robinson, Joseph, & Co., Manchester.

Rowan, David, & Son, Glasgow.

Scott, Ernest, & Mountain, Ltd.,
Newcastle-on-Tyne.Sharples, William, & Co., Rams-
bottom.

Simpson, James, & Co., Ltd., London.

Stewart, John, & Son, Ltd., London.

Strang, Joseph, & Co., Ltd., Rams-
bottom.

Thwaites Brothers, Ltd., Bradford.

Vauxhall Ironworks Co., Ltd., Lon-
don.

Walmsley, Charles, & Co., Ltd., Bury.

Watson, Henry, & Sons, Newcastle-
on-Tyne.

Winder Brothers, Ltd., Sheffield.

Duplex Pumps—Abbott, John, & Co., Ltd., Gates-
head-on-Tyne.

Adamson, Daniel, & Co., Dukinfield.

Amos & Smith, Hull.

Bailey, W. H., & Co., Ltd., Man-
chester.

Bow, M'Lachlan & Co., Paisley.

**Pumps and Pumping Engines—
continued.**

Duplex Pumps—continued.

Brown Brothers & Co., Ltd., Edinburgh.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carrick & Wardale, Gateshead-on-Tyne.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clyne, Mitchell & Co., Aberdeen.
 Coates, Victor, & Co., Ltd., Belfast.
 Dougill, Alf., & Co., Ltd., Leeds.
 Easton, Anderson & Goolden, Ltd., Erith.
 Evans, Joseph, & Sons, Wolverhampton.
 Fielding & Platt, Ltd., Gloucester.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Greenock Foundry Co., Greenock.
 Greenwood & Batley, Ltd., Leeds.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Lamont & Co., Paisley.
 Leeds Engineering and Hydraulic Co., Ltd., Leeds.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Mavor & Coulson, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pulsometer Engineering Co., Ltd., London.
 Ramage & Ferguson, Ltd., Leith.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Rowan, David, & Son, Glasgow.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Stead Brothers, Halifax.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Son Ltd., London.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Vauxhall Ironworks Co., Ltd., London.

Duplex Pumps—continued.

Walker Brothers, Wigan.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.
 Walmsley, Charles, & Co., Ltd., Bury.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Weir, G. & J., Ltd., Glasgow.
 Whitaker, C., & Co., Bradford.
 Winder Brothers, Ltd., Sheffield.

Hydraulic Pumps—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Amos & Smith, Hull.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
 Arrol, Sir William, & Co., Ltd., Glasgow.
 Bailey, W. H., & Co., Ltd., Manchester.
 Beck & Co., Ltd., London.
 Benham & Sons, Ltd., London.
 Bentley & Jackson, Ltd., Bury.
 Berry, Henry, & Co., Leeds.
 Bigwood, J., & Son, Wolverhampton.
 Bow, M'Lachlan & Co., Paisley.
 Brown Brothers & Co., Ltd., Edinburgh.
 Calvert & Co., Huddersfield.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Cowen, G. R., & Co., Nottingham.
 Craig, A. F., & Co., Ltd., Paisley.
 Craven Brothers, Ltd., Manchester.
 Crossley, John, & Co., Halifax.
 Crow, Harvey & Co., Glasgow.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Downham, John, & Co., Bury.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Evans, Joseph, & Sons, Wolverhampton.

**Pumps and Pumping Engines—
continued.**

Hydraulic Pumps—continued.

Fawcett, Preston & Co., Ltd., Liverpool,
Fielding & Platt, Ltd., Gloucester.
Foster, Joseph, & Sons, Preston.
Fraser & Chalmers, Ltd., London.
Fraser, Douglas, & Sons, Arbroath.
Fullarton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Good & Menzies, Ltd., Hull.
Goodwin, Arnold, & Son, London.
Greenwood & Batley, Ltd., Leeds.
Gwynne & Co., London.
Hanna, Donald & Wilson, Paisley.
Hathorn, Davey & Co., Leeds.
Holroyd, Horsfield & Wilson, Ltd., Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Hunter & English, London.
Jackson & Brother, Bolton.
Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
Kenworthy, Royston & Co., Huddersfield.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Leeds Engineering and Hydraulic Co., Ltd., Leeds.
M'Neil, John, & Co., Glasgow.
Manlove, Alliott & Co., Ltd., Nottingham.
Matthews, William, & Co., Manchester.
Middleton, Robert, Leeds.
Moore & Korte, Leeds.
Moreland, Richard, & Sons, Ltd., London.
Milne, James, & Son, Ltd., Edinburgh.
Musgrave Brothers, Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Needham Brothers & Brown, Barnsley.
North-Eastern Marine Engineering Co., Ltd., Sunderland.
Owen, Brazil & Holborow, Bristol.
Pearn, Frank, & Co., Ltd., Manchester.
Perkin & Co., Leeds.
Pulsometer Engineering Co., Ltd., London.
Rice & Co., Leeds.
Richmond, Joseph, & Co., Ltd., London.
Riley, J. H., & Co., Bury.

Hydraulic Pumps—continued.

Robinson, Joseph, & Co., Manchester.
Rose, Downs & Thompson, Ltd., Hull.
St. George's Ironworks, Ltd., Manchester.
Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
Shaw, Mark, Huddersfield.
Simpson, James, & Co., Ltd., London.
Smith, Hugh, & Co., Glasgow.
Smith Brothers & Co., Glasgow.
Stead Brothers, Halifax.
Stevenson & Co., Ltd., Preston.
Stewart, John, & Son, Ltd., London.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, & Co., Ltd., Ramsbottom.
Umpherston & Co., Ltd., Leith.
Wailes, George, & Co., London.
Walker Brothers, Wigan.
Walker, Eaton & Co., Sheffield.
Walker, James, & Son, Edinburgh.
Walker, Samuel, Manchester.
Waller, George, & Co., Stroud.
Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
West End Engine Works Co., Edinburgh.
Whitaker, C., & Co., Bradford.
Wilkinson, William, & Co., Ltd., Wigan.
Worsley Mesnes Iron Works Co., Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Wren, Henry, & Co., Manchester.
Yates & Thom, Blackburn.

Pumping Engines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
Adamson, Daniel, & Co., Dukinfield.
Amos & Smith, Hull.
Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne and Manchester.
Ashton, Frost & Co., Ltd., Blackburn.
Ashworth, Elijah, Manchester.
Bailey, W. H., & Co., Ltd., Manchester.
Barraclough, Joseph, & Sons, Barnsley.
Benham & Sons, Ltd., London.
Bigwood, J., & Son, Wolverhampton.

**Pumps and Pumping Engines—
continued.**

Pumping Engines—continued.

Bow, M'Lachlan & Co., Paisley.
 Bradley, R., & Co., Wakefield.
 Brown Brothers & Co., Ltd., Edinburgh.
 Buckley & Taylor, Oldham.
 Cameron, John, Manchester.
 Campbell & Calderwood, Paisley.
 Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Carruthers, J. H., & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Craig, A. F., & Co., Ltd., Paisley.
 Cran, John, & Co., Leith.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Dougill, Alf., & Co., Ltd., Leeds.
 Dryden, Thomas, Preston.
 Easton, Anderson & Goolden, Ltd., Erith.
 Entwistle & Gass, Ltd., Bolton.
 Evans, Joseph, & Sons, Wolverhampton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fleming & Ferguson, Ltd., Paisley.
 Foster, Joseph, & Sons, Preston.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
 Galloways, Ltd., Manchester.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Goodwin, Arnold, & Son, London.
 Gwynne & Co., London.
 Hanna, Donald & Wilson, Paisley.
 Heald, John, Chorley.
 Hathorn, Davey & Co., Leeds.
 Hick, Hargreaves & Co., Ltd., Bolton.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester,

Pumping Engines—continued.

Kenworthy, Taylor & Co., Barnsley.
 Kincaid, John G., & Co., Greenock.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Ltd., Leeds.
 M'Kie & Baxter, Glasgow.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Matthews, William, & Co., Manchester.
 Middleton, Robert, Leeds.
 Milne, James, & Son, Ltd., Edinburgh.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Owen, Brazil & Holborow, Bristol.
 Pearn, Frank, & Co., Ltd., Manchester.
 Perkin & Co., Ltd., Leeds.
 Qualter, Hall & Co., Barnsley.
 Rawlinsons, Ltd. (late Leeds Machinery Stores Co., Ltd.), Leeds.
 Rice & Co., Leeds.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rowan, David, & Son, Glasgow.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Scott & Hodgson, Manchester.
 Scott, Ernest, & Mountain, Ltd., Newcastle-on-Tyne.
 Sharples, William, & Co., Ramsbottom.
 Simpson, James, & Co., Ltd., London.
 Smith, Hugh, & Co., Glasgow.
 Stead Brothers, Halifax.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, & Co., Ltd., Ramsbottom.
 Umpherston & Co., Ltd., Leith.
 Vauxhall Ironworks Co., Ltd., London.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walker, James, & Son, Edinburgh.
 Walker, Samuel, Manchester.
 Waller, George, & Co., Stroud.

Pumps and Pumping Engines— *continued.*

Pumping Engines—continued.

Walmsley, Charles, & Co., Ltd., Bury.
Watson, Henry, & Sons, Newcastle-on-Tyne.
West End Engine Works Co., Edinburgh.
Wilkinson, William, & Co., Ltd., Wigan.
Winder Brothers, Ltd., Sheffield.
Wood & Gee, Wigan.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
Worsley Mesnes Iron Works Co., Wigan.
Yates & Thom, Blackburn.

Punching and Shearing Machines— *continued.*

Nasmyth, Wilson & Co., Ltd., Patricroft.
Noble & Lund, Felling-on-Tyne.
Oxley Brothers, Ltd., Sheffield.
Pratt, F., & Co., Ltd., Halifax.
Redman, C., & Sons, Halifax.
Scriven & Co., Leeds.
Shepherd, Hill & Co., Ltd., Leeds.
Smith Brothers & Co., Glasgow.
Smith, Daniel, & Co., Wolverhampton.
Smith, G. F., Halifax,
Smith, Hugh, & Co., Glasgow.
Spencer, John, & Co., Keighley.
Stirk, John, & Sons, Halifax.
Walker, Eaton & Co., Sheffield.
Ward & Haggas, Keighley.
White, W. B., Colne.
Wilkinson, G., & Sons, Keighley.

Punching and Shearing Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
Asquith, William, Halifax.
Bennie, James, & Sons, Glasgow.
Berry, Francis, & Sons, Sowerby Bridge.
Berry, Henry, & Co., Leeds.
Birch, G., & Co., Manchester.
Brightside Foundry Co., Ltd., Sheffield.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Cameron, John, Manchester.
Craig & Donald, Johnstone.
Craven Brothers, Ltd., Manchester.
Crow, Harvey & Co., Glasgow.
Davis & Primrose, Leith.
Davy Brothers, Ltd., Sheffield.
Dean, Smith & Grace, Ltd., Keighley.
De Bergue & Co., Ltd., Manchester.
Dickinson, John, & Co., Keighley.
Edward, George, & Co., Johnstone.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Hanna, Donald & Wilson, Paisley.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co., Cleckheaton.
Hulse & Co., Ltd., Manchester.
Luke & Spencer, Ltd., Manchester.
Maud & Turner, Halifax.
Midgley & Sutcliffe, Bradford.
Muir, Wm., & Co., Ltd., Manchester.

Quarry Plant—

(See Stone-Working Machinery.)

Quartz Crushing Machinery—

(See Ore-Crushing Machinery.)

Radial Drills—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle on-Tyne and Manchester.
Asquith, William, Halifax.
Atlas Engineering Co., Manchester.
Berry, Francis, & Sons, Sowerby Bridge.
Buckton, Joshua, & Co., Ltd., Leeds.
Butler, J., & Co., Halifax.
Campbells & Hunter, Leeds.
Craven Brothers, Ltd., Manchester.
Crossley & Co., Johnstone.
Darling & Sellers, Ltd., Keighley.
Dean, Smith & Grace, Ltd., Keighley.
Dickinson, John, & Co., Keighley.
Fraser, Douglas, & Sons, Arbroath.
Greenwood & Batley, Ltd., Leeds.
Hartley, Binns & Co., Halifax.
Hetherington, John, & Sons, Ltd., Manchester.
Hodgson, H. E., & Co. Cleckheaton.
Holroyd, John, & Co., Ltd., Rochdale.

Radial Drills—continued.

Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Manchester,
 Noble & Lund, Felling-on-Tyne.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.
 Spencer, John, & Co., Keighley.
 Spencer, James, & Co., Manchester.
 Standard Tool Co., Sowerby Bridge.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Radiators—

(See Heating Apparatus.)

Rail-Benders—

Berry, Francis, & Sons, Sowerby Bridge.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Henderson, John M., Aberdeen.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith Brothers & Co., Glasgow.
 Smith, Daniel, & Co., Wolverhampton.
 Ward & Haggas, Keighley.

Rails—Iron and Steel—

Bolton Iron and Steel Co., Ltd.;
 Bolton.
 Cammell, Charles, & Co., Ltd., Sheff-
 field.
 Fox, Samuel, & Co., Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.

Railway Plant—

(See also Axles, Buffers, Tyres,
 Locomotives, Light Railway
 Plant.)

Allen, Edgar, & Co., Ltd., Sheffield.
 Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cravens, Ltd., Sheffield.
 Darlington Forge Co., Ltd., Darling-
 ton.
 Fielding & Platt, Ltd., Gloucester.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Gresham & Craven, Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kirkstall Forge Co., Leeds.
 Leeds Forge Co., Ltd., Leeds.
 Mather, Alex., & Son, Edinburgh.
 Pope, W., & Son, Ltd., London.
 Spencer, John, & Sons, Ltd., New-
 castle-on-Tyne.
 Stone, J., & Co., London.
 Turton, George, Platts & Co.,
 Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Railway Works Plant—

(See Contractors' Plant.)

Rams—Hydraulic—

(See also Hydraulic Machinery and
 Appliances.)

Fielding & Platt, Ltd., Gloucester.

Ranges—Kitchen—

Ashwell & Nesbit, Ltd., London and
 Leicester.
 Chadwick, James, Bolton.
 Crumblehulme, W., & Sons, Ltd.,
 Bolton.
 Tonkinson, Henry, & Sons, Sunder-
 land.

Recovery Plant for Bye-Products—

Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Carrick & Wardale, Gateshead-on-Tyne.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Reducing Valves—

Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Dewartance & Co., London.
 Eastwood, Walter, Ashton-under-Lyne.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Jackson & Brother, Bolton.
 Lancaster & Tonge, Ltd., Manchester.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marchant, G. M., Huddersfield.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Roger, R., & Co., Stockton-on-Tees.
 Schofield & Taylor, Huddersfield.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Turnbull, Alexander, & Co., Glasgow.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 Whitley Partners, Leeds.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Reeds and Reed-Making Machinery—

Cook, S., & Co., Bury.

Refrigerating Machinery—

Cole, T. & W., London.
 Hall, J. & E., Ltd., Dartford.
 M'Kinnon, William, & Co., Aberdeen.
 Pulsometer Engineering Co., Ltd., London.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.

Refuse Destructors—

(See Destructors—Refuse.)

Relief Valves—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adams, Thomas, Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Baldwin, James, Keighley.
 Berry, Henry, & Co., Leeds.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Lambeth Brass and Iron Co., Ltd., London.
 Lancaster & Tonge, Ltd., Manchester.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Rice & Co., Leeds.
 Stewart, John, & Son, Ltd., London.
 Storey, Isaac, & Sons, Manchester.
 Turnbull, Alexander, & Co., Glasgow.
 Urnson & Thompson, Oldham.
 Whitley Partners, Leeds.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Repairers—Ship and Engine—

(See also Shipbuilders, Dry Dock Proprietors, Slipway (Ship's Repairing) Proprietors.)

- Albert Dock Engine Works, London.
 Allsup & Co., Ltd., Preston.
 Amor, R., & Co., London.
 Amos & Smith, Hull.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Cran, John, & Co., Leith.
 Central Marine Engine Works, The, West Hartlepool.
 Croom & Arthur, Leith.
 Deptford Dry Docks Co., Ltd., London.
 Dickinson, John, & Sons, Ltd., Sunderland.
 Dunsmuir & Jackson, Glasgow.
 Dunston Engine Works Co., Dunston-on-Tyne.
 Eltringham, J. T., & Co., South Shields.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fletcher, Son & Fearnall, Ltd., London.
 Glengall Iron Works, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Hodge, Samuel, & Sons, Ltd., London.
 Holmes, C. D., & Co., Hull.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lester & Perkins, London.
 Lobnitz & Co., Ltd., Renfrew.
 London Graving Dock Co., Ltd., London.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.

Repairers—Ship and Engine—continued.

- Potter, W. H., & Sons, Liverpool.
 Rait & Gardiner, London.
 Readhead, John, & Sons, South Shields.
 Redpath & Paris, London.
 Renoldson, J. P., & Sons, South Shields.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Rodger, A., & Co., Port-Glasgow.
 Robertson, A. W., & Co., London.
 Robinson & Dodd, London.
 St. George's Ironworks, Ltd., Manchester.
 Scott & Co., Greenock.
 Smith, A. & D., & Co., London.
 Stephens, Smith & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Wallsend Slipway and Engineering Co., Ltd., Newcastle-on-Tyne.

Rice Mill Machinery—

- Foster, Joseph, & Sons, Preston.
 Fullarton, Hodgart & Barclay, Ltd., Paisley.
 Hind & Lund, Ltd., Preston.
 Hunter & English, London.
 M'Neil, John, & Co., Glasgow.
 Mather, Alex., & Son, Edinburgh.
 Waygood, R., & Co., Ltd., Newcastle-on-Tyne.

Riveting Machines—Hydraulic and Pneumatic—

- Arrol, Sir William, & Co., Ltd., Glasgow.
 Bennie, James, & Sons, Glasgow.
 Berry, Henry, & Co., Leeds.
 Brown Brothers & Co., Ltd., Edinburgh.
 Crow, Harvey & Co., Glasgow.
 De Bergue & Co., Ltd., Manchester.
 Dickinson, John, & Co., Keighley.
 Fielding & Platt, Ltd., Gloucester.
 Galloways, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Musgrave Brothers, Leeds.
 Rice & Co., Leeds.
 Ross, R. G., & Son, Glasgow.
 Smith Brothers & Co., Glasgow.
 Smith, Daniel, & Co., Wolverhampton.
 Smith, Hugh, & Co., Glasgow.

Rivet-Making Machinery—

Adamson, Daniel, & Co., Dukinfield.
 Greenwood & Batley, Ltd., Leeds.
 Marsden, Samuel, & Son, Ltd., Manchester.

Rivets—

(See Bolts, Rivets, Screws, Nuts and Washers.)

Road Rollers—

(See Rollers—Road—Steam.)

Rock Breakers—

(See Stone Breakers, Ore Crushers.)

Rock Drills—

Clarke, T. A. W., Leicester.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Henderson, John M., Aberdeen.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Larmuth, Thomas, & Co., Manchester.
 Madan, Charles S., & Co., Manchester.
 Middleton, Robert, Leeds.
 Rosling & Appleby, Bradford.
 St. George's Ironworks, Ltd., Manchester.
 Siemens Brothers & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd., Newcastle-on-Tyne.
 Vauxhall Ironworks Co., Ltd., London.
 Wood, John & Edward, Bolton.

Rollers—Road—Steam—

Calvert & Co., Huddersfield.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Green, Thomas, & Son, Ltd., Leeds.
 M'Laren, J. & H., Leeds.
 Marshall, Sons & Co., Ltd., Gainsborough.

Rolling Mill Engines—

Adamson, Daniel, & Co., Dukinfield.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Crow, Harvey & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Galloways, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co., Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 St. George's Ironworks, Ltd., Manchester.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Sharples, William, & Co., Ramsbottom.
 Stevenson & Co., Ltd., Preston.
 Thornton & Crebbin, Bradford.
 Worsley Mesnes Iron Works Co., Wigan.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Yates & Thom, Blackburn.

Rolls—Bending—

(See Bending Rolls.)

Rolls—Calender—

(See Calenders.)

Rolls and Rolling-Mill Plant—

Brightside Foundry Co., Ltd., Sheffield.
 Davy Brothers, Ltd., Sheffield.
 Fowler, John, Sheffield.
 Galloways, Ltd., Manchester.
 Greenwood & Batley, Ltd., Leeds.
 Jackson, P. R., & Co., Ltd., Manchester.
 Oxley Brothers, Ltd., Sheffield.
 Thornton & Crebbin, Bradford.
 Umpherston & Co., Ltd., Leith.
 Walker, Eaton & Co., Sheffield.
 Winder Brothers, Ltd., Sheffield.

Roofs—

(See Bridges, Roofs and Structural Iron and Steel Work.)

Rope Pulleys—

(See Mill-Gearing, Shafting and Shaft Fittings.)

Rope, Twine and Braid Machinery—

Bywater, William, Leeds.
Clarke, T. A. W., Leicester.
Combe, Barbour & Combe, Ltd., Belfast.
Curtis, Sons & Co., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Lawson, Samuel, & Sons, Leeds.
Taylor, Thomas, Leicester.
Taylor, Wordsworth & Co., Leeds.

Rubber-Mill Machinery—

Bertram, James, & Son, Ltd., Edinburgh.
Bertrams, Ltd., Edinburgh.
Greig, John, & Sons, Edinburgh.
Heald, John, Chorley.
Masson, Scott & Co., Ltd., London.
Robinson, Joseph, & Co., Manchester.
Umpherston & Co., Ltd., Leith.
Walker, Samuel, Manchester.

Safety Valves—

Adamson, Daniel, & Co., Dukinfield.
Adams, Thomas, Manchester.
Bailey, W. H., & Co., Ltd., Manchester.
Baldwin, James, Keighley.
Beeley, Thomas, Hyde.
Berry, Henry, & Co., Leeds.
Billington & Newton, Longport.
Carter, James, & Sons, Stalybridge.
Clark, J. & T., Bradford.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Dewrance & Co., London.
Donkin, Bryan, & Co., Ltd., London.

Safety Valves—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fielding & Platt, Ltd., Gloucester.
Fletcher Brothers, Ashton-under-Lyne.
Frost & Sons, London.
Fullerton, Hodgart & Barclay, Ltd., Paisley.
Furness, Sir C., Westgarth & Co., Ltd., Middlesbrough.
Galloways, Ltd., Manchester.
Jackson & Brother, Bolton.
Lambeth Brass and Iron Co., Ltd., London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Meadowcroft, C. H., & Brother, Dukinfield.
Moorhouse, Sydney, & Co., Stalybridge.
Moorhouse, Walter, & Co., Stalybridge.
Morton & Edwards, Stalybridge.
Oldham Boiler Works Co., Ltd., Oldham.
Pease, Rhodes & Co., Ltd., Bradford.
Rice & Co., Leeds.
Roger, R., & Co., Stockton-on-Tees.
Schofield & Taylor, Huddersfield.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Turnbull, Alexander, & Co., Glasgow.
Urmison & Thompson, Oldham.
Whitley Partners, Leeds.
Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Sand-Moulding Machines—

Darling & Sellers, Ltd., Keighley.
Dickinson, John, & Co., Keighley.

Sanitary Appliances—

(See also Heating and Ventilating Engineers.)

Frost & Sons, London.
Milne, James, & Son, Ltd., Edinburgh.
Stone, J., & Co., London.
Waller, George, & Co., Stroud.

Saw Benches—

Clarke, T. A. W., Leicester.
 Glover, M., & Co., Leeds.
 Haigh, W. B., & Co., Oldham.
 Hudson, Hall & Griffith, Keighley.
 M'Dowall, John, & Sons, Johnstone.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Sagar, J., & Co., Halifax.
 Taylor, Thomas, Leicester.
 Thomson, Son & Co., Dundee.
 Ward & Haggas, Keighley.
 White, Thomas, & Sons, Paisley.

Saw Makers—

Allen, Edgar, & Co., Ltd., Sheffield.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Osborn, Samuel, & Co., Sheffield.

Saw Mill Machinery—

(See Wood-Working Machinery.)

Saw Sharpening Machines—

Birch, G., & Co., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hulse & Co., Ltd., Manchester.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Noble & Lund, Felling-on-Tyne.
 Sagar, J., & Co., Halifax.

Saws for Metals—

Allen, Edgar, & Co., Ltd., Sheffield.
 Bennie, James, & Sons, Glasgow.
 Birch, G., & Co., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Davy Brothers, Ltd., Sheffield.
 Dean, Smith & Grace, Ltd., Keighley.

Saws for Metals—continued.

Firth, Thomas, & Sons, Ltd., Sheffield.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Noble & Lund, Felling-on-Tyne.
 Redman, C., & Sons, Halifax.
 Ryder, Thomas, & Son, Bolton.
 Ryder, William, Bolton.
 Scriven & Co., Leeds.
 Smith Brothers & Co., Glasgow.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screw Jacks—

Galloways, Ltd., Manchester.
 Herbert, E. G., Manchester.

Screw Propellers—

(See Propellers and Propeller Blades—Marine.)

Screwing Machines—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Berry, Francis, & Sons, Sowerby Bridge.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Craven Brothers, Ltd., Manchester.
 Dean, Smith & Grace, Ltd., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Harvey, G. & A., Glasgow.
 Heap, William, & Co., Ltd., Ashton-under Lyne.
 Hetherington, John, & Sons, Ltd., Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Pratt, F., & Co., Ltd., Halifax.
 Scriven & Co., Leeds.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Screwing Machines—continued.

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Screws and Studs—

Holroyd, John, & Co., Ltd., Rochdale.
 Kirby Banks Screw Co., Ltd., Leeds.
 Lang, John, & Sons, Johnstone.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Mercer, Edward, Manchester.
 Pool, L., & Son, Leeds.

Search-Light Projectors—

Charlesworth, S., & Co., Oldham.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crompton & Co., Ltd., London and Chelmsford.
 Easton, Anderson & Goolden, Ltd., Erith.
 Hall, J. P., & Co., Oldham.
 Holmes, J. H., & Co., Newcastle-on-Tyne.
 Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Mavor & Coulson, Ltd., Glasgow.
 Siemens Brothers & Co., Ltd., London.

Seed-Crushing Machinery—

Downham, D., & Co., Bury.
 Greenwood & Batley, Ltd., Leeds.
 Harrison & Hammond, Wakefield.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Middleton, Robert, Leeds.
 Richmond & Chandler, Ltd., Manchester.
 Rose, Downs & Thompson, Ltd., Hull.

Separators—

Carter, James., & Sons, Stalybridge.
 Cole, T. & W., London.

Separators—continued.

Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Haigh, W. B., & Co., Oldham.
 Johnson, William, & Sons, Leeds.
 Lancaster & Tonge, Ltd., Manchester.
 Schofield & Taylor, Huddersfield.
 Urmson & Thompson, Oldham.

Sewage Plant—

Ashton, Frost & Co., Ltd., Blackburn.
 Drysdale & Co., Glasgow.
 Gwynne & Co., London.
 Holroyd, Horsfield, & Wilson, Ltd., Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Waller, George, & Co., Stroud.
 Winder Brothers, Ltd., Sheffield.
 Woods, Hamilton, & Co., Ltd., Manchester.

Sewing Machines—

Bradbury & Co., Ltd., Oldham.
 Eclipse Machine Co., Ltd., Oldham.
 Holroyd, John, & Co., Ltd., Rochdale.

Shafting—Marine—

(See also Crank-Shafts.)

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bolton Iron and Steel Co., Ltd., Bolton.
 Brown Brothers & Co., Ltd., Edinburgh.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Sheffield.
 Carmichael, James, & Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clark, George, Ltd., Sunderland.
 Crow, Harvey & Co., Glasgow.
 Darlington Forge Co., Ltd., Darlington.
 Dickinson, John, & Sons, Ltd., Sunderland.

Shafting—Marine—continued.

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Furness, Sir C., Westgarth & Co., Ltd., Middlesbro'.
 Hawthorn, R. & W., Leslie, & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Ince Forge Co., Wigan.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop, Wm., & Sons, Ltd., Sheffield.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 North-Eastern Marine Engineering Co., Ltd., Wallsend-on-Tyne and Sunderland.
 Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
 Richardson, Thomas, & Sons, Ltd., Hartlepool.
 Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
 Vickers, Sons & Maxim, Ltd., Sheffield and Barrow-in-Furness.
 Woodhouse & Rixson, Sheffield.

Shafting—Mill—

(See Mill Gearing, Shafting, etc.)

Shaping Machines—

(See Slotting and Shaping Machines.)

Shearing Machines—

(See Punching and Shearing Machines.)

Shear-Legs—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Easton, Anderson & Goolden, Ltd., Erith.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Henderson, John M., Aberdeen.

Shears—for Blooms and Plates—

(See also Steel and Iron Works Plant.)

Crow, Harvey & Co., Glasgow.
 Davy Brothers, Ltd., Sheffield.
 Scriven & Co., Leeds.
 Smith, Hugh, & Co., Glasgow.

Shipbuilders and Repairers—

(See also Repairers—Ship and Engine.)

Alley & Maclellan, Glasgow.
 Allsup & Co., Ltd., Preston.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
 Barclay, Curle & Co., Ltd., Glasgow.
 Blackwood & Gordon, Port-Glasgow.
 Bow, M'Lachlan & Co., Paisley.
 Brodie, John, & Co., Ltd., London.
 Brown's Dry Dock and Engineering Co., Ltd., London.
 Caird & Co., Ltd., Greenock.
 Caledon Shipbuilding and Engineering Co., Ltd., Dundee.
 Central Marine Engine Works, West Hartlepool.
 Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
 Connell, Charles, & Co., Glasgow.
 Cran, John, & Co., Leith.
 Croom & Arthur, Leith.
 Doxford, W., & Sons, Ltd., Sunderland.
 Duncan, Robert, & Co., Ltd., Port Glasgow.
 Dunlop, David J., & Co., Port Glasgow.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Eltringham, J. T., & Co., South Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Fletcher, Son & Fearnall, Ltd., London.
 Gourlay Brothers & Co., Dundee.
 Green, R. & H., Ltd., London.
 Hall, A., & Co., Aberdeen.
 Hall, Russell & Co., Ltd., Aberdeen.
 Hamilton, William, & Co., Port Glasgow.
 Hanna, Donald & Wilson, Paisley.
 Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.

Shipbuilders and Repairers—continued.

Laird Brothers, Birkenhead.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 London and Glasgow Engineering and
 Iron Shipbuilding Co., Ltd.,
 Glasgow.
 London Graving Dock Co., Ltd.,
 London.
 Lytham Shipbuilding Co., Lytham.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Menzies & Co., Ltd., Leith.
 Morton, S. & H., & Co., Leith.
 Murdoch & Murray, Port-Glasgow.
 Napier, R., & Sons, Ltd., Glasgow.
 North-Eastern Marine Engineering
 Co., Ltd., Wallsend-on-Tyne and
 Sunderland.
 Palmer's Shipbuilding and Iron Co.,
 Ltd., Jarrow-on-Tyne.
 Potter, W. H., & Sons, Liverpool.
 Ramage & Ferguson, Ltd., Leith.
 Readhead, John, & Sons, South
 Shields.
 Rennie, G., & Co., London.
 Renoldson, J. P., & Sons, South
 Shields.
 Richardson, Wigham, & Co., New-
 castle-on-Tyne.
 Robertson, A. W., & Co., London.
 Rodger, A., & Co., Port-Glasgow.
 Russell & Co., Port-Glasgow.
 Scott & Co., Greenock.
 Scott, John, & Co., Kinghorn.
 Simons, William, & Co., Ltd., Ren-
 frew.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Stewart, John, & Sons, Ltd., London.
 Stothert, G. K., & Co., Bristol.
 Swan, C. S., & Hunter, Ltd., New-
 castle-on-Tyne.
 Thorneycroft, John I., & Co., London.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Workman, Clark & Co., Ltd., Belfast.
 Yarrow & Co., Ltd., London.

Ship-Jacks—Hydraulic—

Berry, Henry, & Co., Leeds.
 Fielding & Platt, Ltd., Gloucester.

Ship Sidelights—

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Stone, J., & Co., London.
 Utley, Thomas, & Co., Liverpool.

Ship's Telegraphs—

Baldwin, James, Keighley.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Harrison Engine Co., Ltd., Man-
 chester.
 Siemens Brothers & Co., Ltd., London.

Ship's Ventilators—

(See Ventilating Apparatus.)

Ship's Water-Closets—

Blundell's London Copper and Brass
 Works, Ltd., London.
 Stone, J., & Co., London.

Shipyard Machine Tools—

(See Machine Tools.)

Shot and Shell—

(See Projectiles.)

Silk and Silk-Waste Machinery—

Brooks & Doxey, Ltd., Manchester.
 Curtis, Sons & Co., Manchester.
 Fairbairn, Naylor, Macpherson &
 Co., Ltd., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Hacking & Co., Bury.
 Hall & Steljs, Keighley.
 Harding, Richardson, Rhodes & Co.
 Ltd., Leeds.
 Hetherington, John, & Sons Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.

Silk and Silk-Waste Machinery—cont.

Platt Brothers & Co., Ltd., Oldham.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Heywood.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Wren, Henry, & Co., Manchester.

Sirens and Whistles—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Cran, John, & Co., Leith.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Marchant, G. M., Huddersfield.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Pulsometer Engineering Co., Ltd.,
 London.
 Storey, Isaac, & Sons, Manchester.

Sizing Machinery—

(See Beaming, Warping and Sizing
 Machinery; also Textile Machinery.)

**Slipway (Ship-Repairing) Manu-
 facturers—**

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Kincaid, John G., & Co., Greenock.
 Morton, S. & H., & Co., Leith.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.

**Slipway (Ship-Repairing) Pro-
 prietors—**

Blackwood & Gordon, Port-Glasgow.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Inglis, A. & J., Glasgow.
 Renoldson, J. P., & Sons, South
 Shields.
 Wallsend Slipway and Engineering
 Co., Ltd., Newcastle-on-Tyne.

Slotting and Shaping Machines—

Armstrong, Sir W. G., Whitworth &
 Co., Ltd., Manchester.
 Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Berry, Francis, & Sons, Sowerby
 Bridge.
 Birch, G., & Co., Manchester.
 Bolton Engineering Co., Bolton.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Butler, J., & Co., Halifax.
 Campbells & Hunter, Leeds.
 Crookes, Roberts & Co., Sheffield.
 Craven Brothers, Ltd., Manchester.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hartley, Binns & Co., Halifax.
 Heap, William, & Co., Ltd., Ashton-
 under-Lyne.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Hodgson, H. E., & Co., Cleckheaton.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Kendall & Gent, Manchester.
 Kitson, J., & Sons, Ltd., Bradford.
 Loudon Brothers, Johnstone.
 Maud & Turner, Halifax.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Noble & Lund, Felling-on-Tyne.
 Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.
 Redman, C., & Sons, Halifax.
 Scriven & Co., Leeds.
 Shanks, Thomas, & Co., Johnstone.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith, G. F., Halifax.
 Smith & Coventry, Ltd., Manchester.

Slotting and Shaping Machines—*cont.*

Spencer, James, & Co., Manchester.
 Spencer, John, & Co., Keighley.
 Stirk, John, & Sons, Halifax.
 Swift, George, Halifax.
 Ward & Haggas, Keighley.
 Wilkinson, G., & Sons, Keighley.

Sludge Presses—

Ashton, Frost & Co., Ltd., Blackburn.
 Holroyd, Horsfield, & Wilson, Ltd.,
 Leeds.
 Manlove, Alliott & Co., Ltd., Notting-
 ham.

**Sluice-Valves, Cocks and
Hydrants—**

(See also **Hydraulic Valves and Valves—
Steam, Water, Gas.**)

Bailey, W. H., & Co., Ltd., Man-
 chester.
 Beck & Co., Ltd., London.
 Berry, Henry, & Co., Leeds.
 Billington & Newton, Longport.
 Carter, James, & Sons, Stalybridge.
 Charlesworth, S., & Co., Oldham.
 Clayton, Goodfellow & Co., Ltd.,
 Blackburn.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-Lyne.
 Frost & Sons, London.
 Goodwin, Arnold, & Son, London,
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co.,
 Leeds.
 Marchant, G. M., Huddersfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Staly-
 bridge.
 Pease, Rhodes & Co., Ltd., Bradford.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Waller, George, & Co., Stroud.
 Whitley Partners, Leeds.
 Worth, Mackenzie & Co., Ltd.,
 Stockton-on-Tees.
 Woods, Hamilton, & Co., Ltd.,
 Manchester.

Small-Arms Machinery—

(See **Ordnance Machinery.**)

Smelting Furnaces—

(See **Furnace—Smelting, etc.**)

Smiths' Hearths—

Butler, J., & Co., Halifax.
 Douglass Brothers, Ltd., Blaydon-on-
 Tyne.
 Fraser, Douglas, & Sons, Arbroath.
 Hamer, S. H., Halifax.
 Moore, James, & Sons, Ltd., Belfast.
 Nasmyth, Wilson & Co., Ltd., Man-
 chester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Thwaites Brothers, Ltd., Bradford.

Soap-Making Plant—

Daglish, Robert, & Co., St. Helens.
 Holroyd, Horsfield & Wilson, Ltd.,
 Leeds.
 Johnson, William, & Sons, Leeds.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Musgrave, John, & Son, Ltd., Bolton.
 Shepherd, Hill & Co., Ltd., Leeds.

**Spindles for Spinning Machines
—Fly and Ring—**

Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Cook, Samuel, & Co., Bury.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Proctor, Jonas, Bolton.
 Ryder, William, Bolton.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 White, W. B., Colne.

Spinning and Weaving Machinery—

(See Carpet-Making Machinery, Cotton Preparing and Spinning Machinery, Looms, Silk and Silk Waste Machinery, Textile Machinery, Woollen, Worsted and Waste Machinery.)

Spooling Machines—

Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
Holroyd, John, & Co., Ltd., Rochdale.
Livesey, Henry, Ltd., Blackburn.
White, Thomas, & Sons, Paisley.
Wren, Henry, & Co., Manchester.

Springs—

Adams, Thomas, Manchester.
Brown, John, & Co., Ltd., Sheffield.
Cammell, Charles, & Co., Ltd., Sheffield.
Cockburn, David, Glasgow.
Cockburn, George, & Co., Glasgow.
Cook, Samuel, & Co., Bury.
Fox, Samuel, & Co., Ltd., Sheffield.
Osborn, Samuel, & Co., Sheffield.
Turnbull, Alexander, & Co., Glasgow.
Turton, George, Platts & Co., Sheffield.
White, W. B., Colne.

Stable and Cattle Fittings—

Hayward Brothers & Eckstein, Ltd., London.
Mather, Alex., & Son, Edinburgh.
St. Pancras Ironworks Co., Ltd., London.

Stamp and Drop Hammers—

Bigwood, J., & Son, Wolverhampton.
Clarke, T. A. W., Leicester.
Greenwood & Batley, Ltd., Leeds.
Nasmyth, Wilson & Co., Ltd., Manchester.
Smith, Daniel, & Co., Wolverhampton.

Stamping Machinery—

Bigwood, J., & Son, Wolverhampton.
Bridges, Thomas, & Sons, Wolverhampton.
Fielding & Platt, Ltd., Gloucester.
Greenwood & Batley, Ltd., Leeds.
Smith, Daniel, & Co., Wolverhampton
Wailes, George, & Co., London,

Stampings—

Billington & Newton, Longport.
Central Marine Engine Works, West Hartlepool.
Clarke, T. A. W., Leicester.
Douglass Brothers, Ltd., Blaydon-on-Tyne.
Frost & Sons, London.
Kirkstall Forge Co., Leeds.
Manganese Bronze and Brass Co., Ltd., London.
Phosphor Bronze Co., Ltd., London.
White, W. B., Colne.

Starch-Making Machinery—

Reid, Thonias, & Sons, Paisley.

Steam Cranes—

(See Cranes.)

Steam Engines—

(See Blowing Engines, Driving Engines, Haulage Engines, High-Speed Engines, Marine Engines, Portable Engines, Pumping Engines, Rolling Mill Engines, Traction Engines, Tramway Engines, Winding Engines.)

Steam Hammers—

(See Hammers—Steam.)

Steam Ploughs—

(See Ploughs—Steam.)

Steam Traps—*(See Traps—Steam.)***Steam Whistles—***(See Sirens and Whistles.)***Steel forgings—***(See Forgings—Iron and Steel.)***Steel founders—***(See Iron and Steel founders.)***Steel and Iron Plates and Bars—**Bolton Iron and Steel Co., Ltd.,
Bolton.

Brown, John, & Co., Ltd., Sheffield.

Cammell, Charles, & Co., Ltd., Shef-
field.Darlington Forge Co., Ltd., Dar-
lington.

Jessop, Wm., & Sons, Ltd., Sheffield.

Kirkstall Forge Co., Leeds.

Leeds Forge Co., Ltd., Leeds.

Osborn, Samuel, & Co., Sheffield.

Palmer's Shipbuilding and Iron Co.,
Ltd., Jarrow-on-Tyne.Spencer, John, & Sons, Ltd., New-
castle-on-Tyne.Vickers, Sons & Maxim, Ltd., Shef-
field.**Steel and Iron Works Plant—continued.**

Davy Brothers, Ltd., Sheffield.

Fielding & Platt, Ltd., Gloucester.

Galloways, Ltd., Manchester.

Hanna, Donald & Wilson, Paisley.

Hetherington, John, & Sons, Ltd.,
Manchester.Jackson, P. R., & Co., Ltd., Man-
chester.

Pratt, F., & Co., Ltd., Halifax.

Scriven & Co., Leeds.

Shanks, Thomas, & Co., Johnstone.

Smith, Daniel, & Co., Wolverhampton.

Smith, Hugh, & Co., Glasgow.

Stevenson & Co., Ltd., Preston.

Thornton & Crebbin, Bradford.

Thwaites Brothers, Ltd., Bradford.

Walker Brothers, Wigan.

Winder Brothers, Ltd., Sheffield.

Worth, Mackenzie & Co., Ltd.,
Stockton-on-Tees.**Steel Slabs and Ingots—***(See Ingots; also Billets and Blooms.)***Steering Gear—Ships'—**

Alley & Maclellan, Glasgow.

Amos & Smith, Hull.

Bow, M'Lachlan & Co., Paisley.

Brown Brothers & Co., Ltd., Edin-
burgh.Clarke, Chapman & Co., Ltd., Gates-
head-on-Tyne.

Croom & Arthur, Leith.

Davis & Co., Ltd., London.

Dunston Engine Works Co., Dunston-
on-Tyne.Earle's Shipbuilding and Engineering
Co., Ltd., Hull.Fawcett, Preston & Co., Ltd., Liver-
pool.

Fisher & Co., Paisley.

Harfield & Co., Ltd., Blaydon-on-
Tyne.Harrison Engine Co., Ltd., Man-
chester.

Lester & Perkins, London.

Napier Brothers, Ltd., Glasgow.

Redpath & Paris, London.

Reid, Thomas, & Sons, Paisley.

Roger, R., & Co., Stockton-on-Tees.

Rogerson, John, & Co., Ltd., Wols-
ingham.**Steel and Iron Works Plant—**Abbot, John, & Co., Ltd., Gateshead-
on-Tyne.Armstrong, Sir W. G., Whitworth &
Co., Ltd., Manchester.Ashmore, Benson, Pease & Co., Ltd.,
Stockton-on-Tees.

Bennis, Edward, & Co., Ltd., Bolton.

Berry, Henry, & Co., Leeds.

Booth, Joseph, & Brothers, Leeds.

Brightside Foundry Co., Ltd., Shef-
field.

Buckton, Joshua, & Co., Ltd., Leeds.

Cowans, Sheldon & Co., Ltd., Carlisle.

Craven Brothers, Ltd., Manchester.

Crow, Harvey & Co., Glasgow.

Stereotyping Machinery—

Foster, Joseph, & Sons, Preston.
 Miller & Richard, Edinburgh.
 Taylor, Thomas, Leicester.

Stocks and Dies—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Muir, Wm., & Co., Ltd., Manchester.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Stokers—Mechanical—

(See Mechanical Stokers.)

Stone-Breakers—

Dunston Engine Works Co., Dunston-on-Tyne.
 Fraser & Chalmers, Ltd., London.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Johnson, William, & Sons, Leeds.
 Pegg, Samuel, & Son, Leicester.
 Richards, W., & Son, Leicester.

Stone-Working Machinery—

Abernethy, James, & Co., Aberdeen.
 Cole, T. & W., London.
 Death & Harris, Leicester.
 Henderson, John M., Aberdeen.
 Lee, Croll & Co., Lochee.
 M'Kinnon, William, & Co., Aberdeen.
 Smith, John, Keighley.
 Spencer, J., & Co., Keighley.
 Ward & Haggas, Keighley.

Stop-Valves—

Baldwin, James, Keighley.
 Beck & Co., Ltd., London.
 Billington & Newton, Longport.
 Donkin, Bryan, & Co., Ltd., London.
 Fielding & Platt, Ltd., Gloucester.

Stop-Valves—*continued.*

Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd., London.
 Moorhouse, Sydney, & Co., Stalybridge.
 Musgrave, John, & Son, Ltd., Bolton.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pease, Rhodes & Co., Ltd., Bradford.
 Rice & Co., Leeds.
 Storey, Isaac, & Son, Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Structural Iron and Steel Work—

(See Bridges, Roofs, etc.)

Submarine Cables—

(See Cables.)

Suction-Draught Apparatus—

Brown, John, & Co., Ltd., Sheffield.

Sugar Machinery—

Abernethy, James, & Co., Aberdeen.
 Blake, Barclay & Co., Greenock.
 Bow, M'Lachlan & Co., Paisley.
 Campbell & Calderwood, Paisley.
 Clayton, Howlett & Co., London.
 Craig, A. F., & Co., Ltd., Paisley.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davis & Primrose, Leith.
 Death & Harris, Leicester.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fraser, Douglas, & Sons, Arbroath.
 Fullerton, Hodgart, & Barclay, Ltd., Paisley.
 Kincaid, John G., & Co., Greenock.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marsden, John, & Son, Liverpool.
 Milne, James, & Son, Ltd., Edinburgh.
 Umpherston & Co., Ltd., Leith.
 Waygood, R., & Co., Ltd., London.

Superheaters—

Beeley, Thomas, Hyde.
 Bennis, Edward, & Co., Ltd., Bolton.
 Burnet, Lindsay, & Co., Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Daglish, Robert, & Co., St. Helens.
 Fraser & Chalmers, Ltd., London.
 Hick, Hargreaves & Co., Ltd., Manchester.
 Musgrave, John, & Son, Ltd., Bolton.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Sinclair, George, Leith.

Switches—Electric—

(See Electric Switch Boards; also Electric Light Plant and Fittings.)

Switches—Railway—

Kerr, Stuart & Co., Stoke-on-Trent.

Tanks—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Abernethy, James, & Co., Aberdeen.
 Ashmore, Benson, Pease & Co., Ltd., Stockton-on-Tees.
 Barracough, Joseph, & Sons, Barnsley.
 Bennis, Edward, & Co., Ltd., Bolton.
 Bertrams, Ltd., Edinburgh.
 Berry, John, Halifax.
 Bradley, R., & Co., Wakefield.
 Brightside Foundry Co., Ltd., Sheffield.
 Burnet, Lindsay, & Co., Glasgow.
 Calvert & Co., Huddersfield.
 Carmichael, James, & Co., Ltd., Dundee.
 Clayton, Son & Co., Ltd., Leeds.
 Coates, Victor, & Co., Ltd., Belfast.
 Cockburn, David, Glasgow.
 Craig, A. F., & Co., Ltd., Paisley.
 Crossley, George, Ltd., Cleckheaton.
 Daglish, Robert, & Co., St. Helens.
 Douglass Brothers, Ltd., Blaydon-on-Tyne.
 Douglas Forge Co., Ltd., Wigan.
 Dryden, Thomas, Preston.
 Edie, Henry, & Co., London.
 Eltringham, J. T., & Co., South Shields.

Tanks—continued.

Foster, Joseph, & Sons, Preston.
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Hanna, Donald & Wilson, Paisley.
 Hall, John, & Son, Oldham.
 Hawthorns & Co., Ltd., Leith.
 Heald, John, Chorley.
 Hodge, Samuel, & Sons, Ltd., London.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 M'Kinnon, William, & Co., Aberdeen.
 M'Neil, John, & Co., Glasgow.
 Mechan & Sons, Glasgow.
 Milne, James, & Son, Ltd., Edinburgh.
 Moore, James, & Sons, Ltd., Belfast.
 Moreland, Richard, & Son, Ltd., London.
 Musgrave, John, & Son, Ltd., Bolton.
 Pease, Rhodes & Co., Ltd., Bradford.
 Ritchie, Hart & Co., Ltd., Belfast.
 Rose, Downs & Thompson, Ltd., Hull.
 Simpson, James, & Co., Ltd., London.
 Stevenson & Co., Ltd., Preston.
 Stewart, John, & Son, Ltd., London.
 Strang, Joseph, Ltd., Ramsbottom.
 Thornton & Crebbin, Bradford.
 Tinker, Shenton & Co., Hyde.
 West End Engine Works Co., Edinburgh.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Taps and Dies—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Heap, William, & Co., Ltd., Ashton-under-Lyne.
 Holroyd, John, & Co., Ltd., Rochdale.
 Marsden, Samuel, & Son, Ltd., Manchester.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.
 Widdowson, J. H., Manchester.

Tapping Machines—*(See Boring and Tapping Machines.)***Tea-Dressing Machinery—**

Abernethy, James, & Co., Aberdeen.
 Clarke, T. A. W., Leicester.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Moreland, Richard, & Son, Ltd., London.
 Robin Hood Cycle Co., Ltd., Nottingham.

Telegraph Cables and Wires—*(See Cables.)***Telegraphic Apparatus for Ships—**

Brown Brothers & Co., Ltd., Edinburgh.
 Chadburn & Sons, Ltd., Liverpool.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Johnson & Phillips, Old Charlton.
 Mechan & Sons, Glasgow.
 Siemens Brothers & Co., Ltd., London.

Telegraphic Instruments and Land Line Materials—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Telephones—

Jackson, P. R., & Co., Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Siemens Brothers & Co., Ltd., London.

Testing Machines—

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Bailey, W. H., & Co., Ltd., Manchester.
 Buckton, Joshua, & Co., Ltd., Leeds.
 Craven Brothers, Ltd., Manchester.
 Crow, Harvey & Co., Glasgow.
 Denison, Samuel, & Son, Leeds.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Greenwood & Batley, Ltd., Leeds.
 Smith, Hugh, & Co., Glasgow.
 Vauxhall Ironworks Co., Ltd., London.

Textile Machinery—*See also Sections undernoted :—*

Beaming, Warping and Sizing.
 Bleaching.
 Carpet Making.
 Cloth Finishing.
 Cloth Raising.
 Cotton Preparing and Spinning.
 Cotton Waste and Wadding.
 Dyeing.
 Flannelette Finishing.
 Flax, Hemp and Jute.
 Jacquard Looms.
 Lace.
 Linnenette Finishing.
 Looms.
 Rope, Twine and Braid.
 Silk and Silk Waste.
 Thread.
 Washing.
 Woollen, Worsted and Waste.

Arundel & Co., Stockport.
 Ashworth, Elijah, Manchester.
 Atherton Brothers, Ltd., Preston.
 Ayrton, William, & Co., Manchester.
 Blackburn, George, & Sons, Ltd., Nottingham.
 Bailey & Garnett, Ltd., Stalybridge.
 Blackburn Loom and Weaving Machinery Making Co. (William Dickinson & Sons), Ltd., Blackburn.
 Bodden, William, & Son, Oldham.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Clarke, T. A. W., Leicester.
 Cliffe & Co., Huddersfield.

Textile Machinery—continued.

Combe, Barbour & Combe, Ltd., Belfast.
 Cooke, W., Nottingham.
 Cooper Brothers, Ltd., Burnley.
 Cotton, Stephen, & Co., Belfast.
 Coulthard, T., & Co., Preston.
 Craig, A. F., & Co., Ltd., Paisley.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Dodd, Samuel, Oldham.
 Downham, J., & Co., Bury.
 Edmeston, Archd., & Sons, Manchester.
 Entwistle & Gass, Ltd., Bolton.
 Farmer, Sir James, & Sons, Ltd., Manchester.
 Fraser, Douglas, & Sons, Arbroath.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Greenwood & Battley, Ltd., Leeds.
 Hacking & Co., Bury.
 Hague, B., Nottingham.
 Haigh, John, & Sons, Ltd., Huddersfield.
 Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co., Ltd., Leeds.
 Hattersley, G., & Sons, Ltd., Keighley.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holliday, Read, & Son, Ltd., Huddersfield.
 Holt, Thomas, Ltd., Rochdale.
 Horner, George, Belfast.
 Hosiery Machine Building Co., Nottingham.
 Houston & Hamilton, Belfast.
 Hutchinson, Hollingworth & Co., Ltd., Huddersfield, Dobcross, and Halifax.
 Jackson & Brother, Bolton.
 Jefferson, Joseph, & Brothers, Bradford.
 Keighley, George, Burnley.
 Kenworthy, Royston & Co., Huddersfield.
 Kiddier, J., & Son, Nottingham.
 Kilburn, R., & Sons, Leeds.
 Kitson, J., & Sons, Ltd., Bradford.
 Larmuth, Thomas, & Co., Manchester.
 Lawson, Samuel, & Sons, Leeds.
 Leach & Co., Rochdale.
 Lee, Croll & Co., Lochee.
 Lees, Asa, & Co., Ltd., Oldham.
 Livesey, Henry, Ltd., Blackburn.
 Low, James F., & Co., Monifieth.
 M'Gee, Walter, & Son, Paisley.
 Mason, John, Rochdale.
 Miller, Moses, & Sons, Ltd., Nottingham.

Textile Machinery—continued.

Nottingham Engineering Co., Ltd., Nottingham.
 Parker, Charles, Sons & Co., Dundee.
 Parkinson, J., Shipley.
 Pegg, Samuel, & Son, Leicester.
 Penberton & Co., Burnley.
 Petrie, John, Jun., Ltd., Rochdale.
 Pilling, John, & Sons, Ltd., Colne.
 Platt Brothers & Co., Ltd., Oldham.
 Proctor, Jonas, Bolton.
 Ramsden Brothers, Keighley.
 Ratcliffe, J., & Sons, Leeds.
 Reynolds, James, & Co., Belfast.
 Richardson, Tuer & Co., Manchester.
 Riley, J. H., & Co., Bury.
 Ritchie, Hart & Co., Ltd., Belfast.
 Robertson & Orchar, Ltd., Dundee.
 Robinson, Joseph, & Co., Manchester.
 Robinson, William, & Son, Oldham.
 Ryder, Thomas, & Son, Bolton.
 Shorrock, J. & R., Darwen.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd., Heywood.
 Strang, Joseph, Ltd., Ramsbottom.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Huddersfield.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Stalybridge.
 Taylor, Thomas, Leicester.
 Taylor, Wordsworth & Co., Leeds.
 Thonison, Son & Co., Dundee.
 Tomlinson, G. W., Huddersfield.
 Tomlinson, James (Rochdale), Ltd., Rochdale.
 Urquhart, Lindsay & Co., Ltd., Dundee.
 Walker, Samuel, Manchester.
 White, Thomas, & Sons, Paisley.
 White, W. B., Colne.
 Whiteley, William, & Sons, Ltd., Huddersfield.
 Wren, Henry, & Co., Manchester.

Thread Machinery—

Ayrton, William, & Co., Manchester.
 Brooks & Doxey, Ltd., Manchester.
 Holt, Thomas, Ltd., Rochdale.
 M'Gee, Walter, & Son, Paisley.
 White, Thomas, & Sons, Paisley.
 Wren, Henry, & Co., Manchester.

Time-Checking Machines—

Bailey, W. H., & Co., Ltd., Manchester.
Keighley Electrical Engineering Co., Ltd., Keighley.

Tinplate Working Machinery—

(See Machine Tools.)

Tip-Waggons—

Henderson, John M., Aberdeen.
Johnson, William, & Sons, Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.

Tobacco Machinery—

Coates, Victor, & Co., Ltd., Belfast.
Cole, T. & W., London.
Davis & Primrose, Leith.
Eclipse Machine Co., Ltd., Oldham.
Greig, John, & Sons, Edinburgh.
Houston & Hamilton, Belfast.
Luke & Spencer, Ltd., Manchester.
Marsden, John, & Son, Liverpool.
Middleton, Robert, Leeds.

Tools—Hand and Small—

Feather, George R., Bolton.
Firth, Thomas, & Sons, Ltd., Sheffield.
Herbert, E. G., Manchester.
Smith, Daniel, & Co., Wolverhampton.
Whiteley's Acme Cycle Co., Ltd., Leeds.

Tools—Machine—

(See Machine Tools.)

Tools—Steel—

Allen, Edgar, & Co., Ltd., Sheffield.
Bolton Iron and Steel Co., Ltd., Bolton.
Brown, John, & Co., Ltd., Sheffield.

Tools—Steel—continued.

Cammell, Charles, & Co., Ltd., Sheffield.
Jessop, Wm., & Sons, Ltd., Sheffield.
Osborn, Samuel, & Co., Sheffield.
Owen, Brazil & Holborow, Sheffield.
Spencer, John, & Sons, Ltd., Newcastle-on-Tyne.
Turton, George, Platts & Co., Sheffield.
Winder Brothers, Ltd., Sheffield.
Woodhouse & Rixson, Sheffield.*

Torpedo Boats—as a Specialty—

Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Hanna, Donald & Wilson, Paisley.
Laird Brothers, Birkenhead.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Thornycroft, John I., & Co., London.
Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
Yarrow & Co., Ltd., London.

Torpedo-Boat Destroyers—as a Specialty—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Newcastle-on-Tyne.
Clydebank Engineering and Shipbuilding Co., Ltd., Clydebank, N.B.
Doxford, W., & Sons, Ltd., Sunderland.
Earle's Shipbuilding and Engineering Co., Ltd., Hull.
Hanna, Donald & Wilson, Paisley.
Hawthorn, R. & W., Leslie & Co., Ltd., Newcastle-on-Tyne.
Laird Brothers, Birkenhead.
Palmer's Shipbuilding and Iron Co., Ltd., Jarrow-on-Tyne.
Thornycroft, John I., & Co., London.
Vickers, Sons & Maxim, Ltd., Barrow-in-Furness.
Yarrow & Co., Ltd., London.

Torpedos and Torpedo Gear—

Cammell, Charles, & Co., Ltd., Sheffield.
Firth, Thomas, & Sons, Ltd., Sheffield.
Greenwood & Batley, Ltd., Leeds.

Traction Engines—

Fowler, John, & Co. (Leeds), Ltd.,
Leeds.
M'Laren, J. & H., Leeds.
Mann & Charlesworth, Leeds.
Marshall, Sons & Co., Ltd., Gains-
borough.

Tramway Engines and Plant—

Beyer, Peacock & Co., Ltd., Man-
chester.
Brown Brothers & Co., Ltd., Edin-
burgh.
Greenwood & Batley, Ltd., Leeds.
Kerr, Stuart & Co., Stoke-on-Trent.
Wilkinson, Wm., & Co., Ltd., Wigan.

Transformers—Electric—

(See Electric Transformers.)

Traps—Steam—

Bailey, W. H., & Co., Ltd., Man-
chester.
Carter, James, & Sons, Stalybridge.
Cole, T. & W., London.
Crowley, John, & Co., Ltd., Sheffield.
Eastwood, Walter, Ashton-under-
Lyne.
Edmeston, Archd., & Sons, Manchester.
Empire Engineering Co., Manchester.
Feather, George R., Bolton.
Fletcher Brothers, Ashton-under-
Lyne.
Haigh, W. B., & Co., Oldham.
Holden & Brooke, Ltd., Manchester.
Lambeth Brass and Iron Co., Ltd.,
London.
Lancaster & Tonge, Ltd., Manchester.
Marchant, G. M., Huddersfield.
Moorhouse, Sydney, & Co., Staly-
bridge.
Moorhouse, Walter, & Co., Staly-
bridge.
Oldham, Alexander, & Sons, Dukin-
field.
Oldroyd, Edwin, & Co., Ltd., Leeds.
Pease, Rhodes & Co., Ltd., Bradford.
Richardson, Thomas, & Sons, Ltd.,
Hartlepool.

Traps—Steam—continued.

Ritchie, Hart & Co., Ltd., Belfast.
Saxon, George, Manchester.
Schofield & Taylor, Huddersfield.
Sharples, William, & Co., Rams-
bottom.
Storey, Isaac, & Sons, Manchester.
Strang, Joseph, Ltd., Ramsbottom.
Thornycroft, John I., & Co., London.
Turnbull, Alexander, & Co., Glasgow.
Urmson & Thompson, Oldham.
West End Engine Works Co., Edin-
burgh.
Whitley Partners, Leeds.

Travelling Cranes—

(See Cranes.)

**Trawlers—Steam—as a
Specialty—**

Caledon Shipbuilding and Engineering
Co., Ltd., Dundee.
Earle's Shipbuilding and Engineering
Co., Ltd., Hull.
Hall, A., & Co., Aberdeen.
Hall, Russell & Co., Ltd., Aberdeen.
Hanna, Donald & Wilson, Paisley.
Hawthorns & Co., Ltd., Leith.
Jones, John, & Sons, Liverpool.
Lobnitz & Co., Ltd., Renfrew.
Mackie & Thomson, Glasgow.
North-Eastern Marine Engineering
Co., Ltd., Sunderland.
Rennoldson, J. P., & Sons, South
Shields.
Scott, John, & Co., Kinghorn.

Trucks, Trolleys, Barrows, etc.

Coubro & Scrutton, London.

Tube Expanders—

Cole, T. & W., London.

Tube and Rod Drawing Plant—

Berry, Henry, & Co., Leeds.
 Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Fielding & Platt, Ltd., Gloucester.
 Middleton, Robert, Leeds.
 Oldroyd, Edwin, & Co., Ltd., Leeds.
 Smith, Daniel, & Co., Wolverhampton.

Tubes—Brass and Copper—

Elmore's Copper Depositing Co., Ltd.,
 Leeds.
 Frost & Sons, London.
 Manganese Bronze and Brass Co.,
 Ltd., London.
 Phosphor Bronze Co., Ltd., London.

Tubes—Iron and Steel—

Brown, John, & Co., Ltd., Sheffield.
 Frost & Sons, London.
 Lambeth Brass and Iron Co., Ltd.,
 London.

Tug Boats—Steam—

Barclay, Curle & Co., Ltd., Glasgow.
 Cran, John, & Co., Leith.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Eltringham, J. T., & Co., South
 Shields.
 Fleming & Ferguson, Ltd., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Hawthorns & Co., Ltd., Leith.
 Henderson, D. & W., & Co., Glasgow.
 Jones, John, & Sons, Liverpool.
 Kincaid, John G., & Co., Greenock.
 Lees, Anderson & Co., Glasgow.
 Lobnitz & Co., Ltd., Renfrew.
 M'Kie & Baxter, Glasgow.
 Mackie & Thomson, Glasgow.
 Ramage & Ferguson, Ltd., Leith.
 Rennoldson, J. P., & Sons, South
 Shields.
 Robertson, A. W., & Co., London.
 Scott & Co., Greenock.
 Stewart, John, & Co., Ltd., London.
 Stephenson, Robert, & Co., Ltd.,
 Newcastle-on-Tyne.
 Thornycroft, John I., & Co., London.
 Vauxhall Ironworks Co., Ltd., Lon-
 don.
 Vickers, Sons & Maxim, Ltd., Bar-
 row-in-Furness.
 Yarrow & Co., Ltd., London.

Turbines—

Carrick & Ritchie, Edinburgh.
 Cran, John, & Co., Leith.
 Fraser & Chalmers, Ltd., London.
 Greenwood & Batley, Ltd., Leeds.
 Günther, W., & Sons, Oldham.
 Gwynne & Co., London.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Moreland, Richard, & Son, Ltd., Lon-
 don.
 Parsons, C. A., & Co., Newcastle-on-
 Tyne.
 Sharples, William, & Co., Rams-
 bottom.
 Thomson, Son & Co., Dundee.

Turntables—

Brightside Foundry Co., Ltd., Shef-
 field.
 Cowans, Sheldon & Co., Ltd., Carlisle.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Hanna, Donald & Wilson, Paisley.
 Johnson, William, & Sons, Leeds.
 Kerr, Stuart & Co., Stoke-on-Trent.
 Kincaid, John G., & Co., Greenock.
 Larmuth, Thomas, & Co., Man-
 chester.
 Mechan & Sons, Glasgow.
 St. George's Ironworks, Ltd., Man-
 chester.
 Taylor & Hubbard, Leicester.

Turret Clocks—

Bailey, W. H., & Co., Ltd., Man-
 chester.

Twine Machinery—

(See Rope, Twine and Braid
 Machinery.)

Twist Drill Grinders—

Greenwood & Batley, Ltd., Leeds.
 Holroyd, John, & Co., Ltd., Rochdale.
 Kendall & Gent, Manchester.
 Lang, John, & Sons, Johnstone.
 Luke & Spencer, Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.

Twist Drills—

Holroyd, John, & Co., Ltd., Rochdale.
 Muir, Wm., & Co., Ltd., Manchester.
 Smith & Coventry, Ltd., Manchester.

Tyres—Cycle—

(See Cycles and Cycle Parts.)

Tyres—Railway—

(See also Railway Plant.)

Bolton Iron and Steel Co., Ltd.,
 Bolton.
 Brown, John, & Co., Ltd., Sheffield.
 Cammell, Charles, & Co., Ltd., Shef-
 field.
 Firth, Thomas, & Sons, Ltd., Sheffield.
 Fox, Samuel, & Co., Sheffield.
 Vickers, Sons & Maxim, Ltd., Shef-
 field.

Umbrella Frames—

Fox, Samuel, & Co., Sheffield.

Vacuum Pumps and Apparatus

Allen, Harrison & Co., Manchester.
 Blake, Barclay & Co., Greenock.
 Browett, Lindley & Co., Ltd., Patri-
 croft.
 Calvert & Co., Huddersfield.
 Carrick & Wardale, Gateshead-on-
 Tyne.
 Fawcett, Preston & Co., Ltd., Liver-
 pool.
 Foster, Joseph, & Sons, Preston.
 M'Neil, John, & Co., Glasgow.
 Manlove, Alliott & Co., Ltd., Notting-
 ham.
 Pulsometer Engineering Co., Ltd.,
 London.
 Strang, Joseph, Ltd., Ramsbottom.

**Valves and Cocks—Steam,
 Water, Gas—**

(See also Reducing Valves, Relief Valves,
 Safety Valves, Stop Valves.)

Abbot, John, & Co., Ltd., Gateshead-
 on-Tyne.
 Adams, Thomas, Manchester.
 Adamson, Daniel, & Co., Dukinfield.
 Alley & Maclellan, Glasgow.
 Arrol, Sir William, & Co., Ltd.,
 Glasgow.
 Bailey, W. H., & Co., Ltd., Man-
 chester.
 Baldwin, James, Keighley.
 Berry, John, Halifax.
 Beck & Co., Ltd., London.
 Beeley, Thomas, Hyde.
 Berry, Henry, & Co., Leeds.
 Billington & Newton, Longport.
 Calvert & Co., Huddersfield.
 Carter, James, & Sons, Stalybridge.
 Clark, J. & T., Bradford.
 Clayton, Goodfellow & Co., Ltd..
 Blackburn.
 Cockburn, David, Glasgow.
 Cockburn, George, & Co., Glasgow.
 Dewrance & Co., London.
 Donkin, Bryan, & Co., Ltd., London.
 Earle's Shipbuilding and Engineering
 Co., Ltd., Hull.
 Easton, Anderson & Goolden, Ltd.,
 Erith.
 Eastwood, Walter, Ashton-under-Lyne.
 Empire Engineering Co., Manchester.
 Feather, George R., Bolton.
 Fielding & Platt, Ltd., Gloucester.
 Fletcher Brothers, Ashton-under-
 Lyne.
 Frost & Sons, London.
 Fullerton, Hodgart & Barclay, Ltd.,
 Paisley.
 Galloways, Ltd., Manchester.
 Goodwin, Arnold, & Son, London.
 Hall, John, & Son, Oldham.
 Hanna, Donald & Wilson, Paisley.
 Holroyd, Horsfield & Wilson, Ltd.,
 Leeds.
 Hunter & English, London.
 Jackson & Brother, Bolton.
 Lambeth Brass and Iron Co., Ltd.,
 London.
 Lancaster & Tonge, Ltd., Manchester.
 Leeds Engineering and Hydraulic Co.,
 Leeds.
 Madan, Charles S., & Co., Manches-
 ter.
 Manganese Bronze and Brass Co.,
 Ltd., London.
 Marchant, G. M., Huddersfield,

Valves and Cocks—Steam, Water, Gas
—continued.

Marsden, John, & Son, Liverpool.
 Meadowcroft, C. H., & Brother, Dukinfield.
 Milne, James, & Son, Ltd., Edinburgh.
 Moorhouse, Sydney, & Co., Stalybridge.
 Moorhouse, Walter, & Co., Stalybridge.
 Morton & Edwards, Stalybridge.
 Musgrave Brothers, Leeds.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Oldham Boiler Works Co., Ltd., Oldham.
 Pearn, Frank, & Co., Ltd., Manchester.
 Pease, Rhodes & Co., Ltd., Bradford.
 Remington, T. W., & Co., London.
 Ross, R. G., & Son, Glasgow.
 Saxon, George, Manchester.
 Schofield & Taylor, Huddersfield.
 Simpson, James, & Co., Ltd., London.
 Stone, J., & Co., London.
 Storey, Isaac, & Sons, Manchester.
 Strang, Joseph, Ltd., Ramsbottom.
 Turnbull, Alexander, & Co., Glasgow.
 Urmson & Thompson, Oldham.
 Wailes, George, & Co., London.
 Waller, George, & Co., Stroud.
 Watson, Henry, & Sons, Newcastle-on-Tyne.
 West's Gas Improvement Co., Ltd., Manchester.
 Whitley Partners, Leeds.
 Woods, Hamilton, & Co., Ltd., Manchester.
 Worth, Mackenzie & Co., Ltd., Stockton-on-Tees.

Ventilating Apparatus—

(*See Heating and Ventilating Apparatus, Fans, and Mine Ventilation Plant.*)

Browett, Lindley & Co., Ltd., Patricroft.
 Bumsted & Chandler, Hednesford.
 Donkin, Bryan, & Co., Ltd., London.
 Dougill, Alf, & Co., Ltd., Leeds.
 Gimson & Co. (Leicester), Ltd., Leicester.
 Haswell, J. Stenson, & Co., Leicester.
 Marsden, John, & Son, Liverpool.

Ventilating Apparatus—*continued.*

Mechan & Sons, Glasgow.
 Pease, Rhodes & Co., Ltd., Bradford.
 Storey, Isaac, & Sons, Manchester.
 Thwaites Brothers, Ltd., Bradford.
 Turton, George, Platts & Co., Sheffield.
 Utley, Thomas, & Co., Liverpool.
 Walker Brothers, Wigan.

Vice Makers—

Parkinson, J., Shipley.
 Pratt, F., & Co., Ltd., Halifax.

Vulcanizing Plant—

Galloways, Ltd., Manchester.
 Johnson & Phillips, Old Charlton.
 Robinson, Joseph, & Co., Manchester.

Wadding Machinery—

(*See Cotton Waste and Wadding Machinery; also Woollen, Worsted and Waste Machinery.*)

Waggons—Railway—

(*See Railway Plant.*)

Waggons—Tip—

(*See Tip-Waggons.*)

Warping Machinery—

(*See Beaming and Warping Machinery; also Textile Machinery.*)

Washers—

(*See Bolts, Nuts, Rivets, Screws and Washers.*)

Washing Machinery—**Coal—**

Fraser & Chalmers, Ltd., London.
Hodgson, H. E., & Co., Cleckheaton.

Laundry—

Ashwell & Nesbit, Ltd., London and Leicester.
Benham & Sons, Ltd., London.
Manlove, Alliott & Co., Ltd., Nottingham.

Ore—

Fraser & Chalmers, Ltd., London.

Textile—

Downham, John, & Co., Bury.
Edmeston, Archd., & Sons, Manchester.
Farmer, Sir James, & Sons, Ltd., Manchester.
Fraser, Douglas, & Sons, Arbroath.
Jackson & Brother, Bolton.
Jardine, John, Nottingham.
Kenworthy, Royston & Co., Huddersfield.
McNaught, John & William, Rochdale.
Pegg, Samuel, & Son, Leicester.
Petrie, John, Jun., Ltd., Rochdale.
Riley, J. F., Huddersfield.
Robinson, Joseph, & Co., Manchester.
Stead Brothers, Halifax.
Taylor, Wordsworth & Co., Leeds.
Thomson, Son & Co., Dundee.
Walker, Samuel, Manchester.

Water Closets—Ships'—

(See Ships' Water Closets.)

Water Meters—

Beck & Co., Ltd., London.
Goodwin, Arnold, & Son, London.

Water Pipes—

(See Pipes.)

Water Purification and Softening Apparatus—

Gimson & Co. (Leicester), Ltd.,
Leicester.
Pope, W., & Son, Ltd., London.
Thwaites Brothers, Ltd., Bradford.

Water-Tube Boilers—

(See Boilers—Steam.)

Water Wheels—

Abernethy, James, & Co., Aberdeen.
Bailey, W. H., & Co., Ltd., Manchester.
Barry, Henry, & Co., Ltd., Aberdeen.
Carrick & Ritchie, Edinburgh.
Clark, J. & T., Bradford.
Coates, Victor, & Co., Ltd., Belfast.
Daglish, Robert, & Co., St. Helens.
Davis & Primrose, Leith.
Death & Harris, Leicester.
Dryden, Thomas, Preston.
Fawcett, Preston & Co., Ltd., Liverpool.
Fraser & Chalmers, Ltd., London.
Gimson & Co. (Leicester), Ltd.,
Leicester.
Hanna, Donald & Wilson, Paisley.
Hind & Lund, Ltd., Preston.
Holroyd, Horsfield & Wilson, Ltd.,
Leeds.
Hoyle, Elkanah, & Sons, Ltd., Halifax.
Jackson & Brother, Bolton.
Kerr, Stuart & Co., Stoke-on-Trent.
Lees, Anderson & Co., Glasgow.
M'Neil, John, & Co., Glasgow.
Mather, Alex., & Sons, Edinburgh.
Mechan & Sons, Glasgow.
Milne, James, & Son, Ltd., Edinburgh.
Saxon, George, Manchester.
Sharples, William, & Co., Ramsbottom.
Thomson, Son & Co., Dundee.
Waygood, R., & Co., Ltd., London.
Whitaker, C., & Co., Bradford.
Wren, Henry, & Co., Manchester.

Weaving Machinery—

(See Looms; also Textile Machinery.)

Weighing Machinery—

Denison, Samuel, & Son, Leeds.
Spencer, James, & Co., Manchester.
Walker, Eaton & Co., Sheffield.

Well-Sinking and Boring Machinery—

Carrick & Wardale, Gateshead-on-Tyne.
 Evans, Joseph, & Sons, Wolverhampton.
 Matthews, William, & Co., Manchester.
 Saxon, George, Manchester.
 Walmsley, Charles, & Co., Ltd., Bury.

Wheel and Axle Makers—

(See Axles; also Railway Plant.)

Wheel-Cutting Machinery—

Armstrong, Sir W. G., Whitworth & Co., Ltd., Manchester.
 Atlas Engineering Co., Manchester.
 Birch, G., & Co., Manchester.
 Butler, J., & Co., Halifax.
 Darling & Sellers, Ltd., Keighley.
 Dean, Smith & Grace, Ltd., Keighley.
 Dickinson, John, & Co., Keighley.
 Greenwood & Batley, Ltd., Leeds.
 Hetherington, John, & Sons, Ltd., Manchester.
 Holroyd, John, & Co., Ltd., Rochdale.
 Hulse & Co., Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Kendal & Gent, Manchester.
 Lang, John, & Son, Johnstone.
 Midgley & Sutcliffe, Bradford.
 Muir, Wm., & Co., Ltd., Manchester.
 Scott & Hodgson, Manchester.
 Shepherd, Hill & Co., Ltd., Leeds.
 Smith & Coventry, Ltd., Manchester.
 Stirke, John, & Sons, Halifax.
 Wilkinson, G., & Sons, Keighley.

Wheel Cutting ("To the Trade")—

Asquith, William, Halifax.
 Atlas Engineering Co., Manchester.
 Bailey & Garnett, Ltd., Stalybridge.
 Barlow, H. B., & Co., Manchester.
 Birch, G., & Co., Manchester.
 Darling & Sellers, Ltd., Keighley.

Wheel Cutting—"To the Trade")—cont.

Gibson, J., & Co., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Hutchinson, Hollingworth & Co., Ltd., Dobcross.
 Jackson, P. R., & Co., Ltd., Manchester.
 Lang, John, & Sons, Johnstone.
 Mayes, John, London.
 Parkinson, J., Shipley.
 Scott & Hodgson, Manchester.
 Smith & Coventry, Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheel-Moulding Machines—

Buckley & Taylor, Oldham.
 Craven Brothers, Ltd., Manchester.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Whittaker, William, & Sons, Oldham.

Wheels—Geared, Machine Moulded, Fly, etc—

(See Mill Gearing, Shafting and Shaft Fittings.)

Whistles—Steam—

(See Sirens and Whistles.)

Winches—Steam—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Crook, Thomas T., Bolton.
 Good & Menzies, Hull.
 Roger, R., & Co., Stockton-on-Tees.
 Stewart, John, & Son, Ltd., London.

Winding Engines and Machinery

Abbot, John, & Co., Ltd., Gateshead-on-Tyne.
 Adamson, Daniel, & Co., Dukinfield.
 Ashton, Frost & Co., Ltd., Blackburn.
 Barracough, Joseph, & Sons, Barnsley.
 Booth, Joseph, & Brothers, Leeds.
 Bradley, R., & Co., Wakefield.

**Winding Engines and Machinery—
—continued.**

Carmichael, James, & Co., Ltd., Dundee.
 Carrick & Wardale, Gateshead-on-Tyne.
 Chaplin, Alex., & Co., Glasgow.
 Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Clayton, Goodfellow & Co., Ltd., Blackburn.
 Coates, Victor, & Co., Ltd., Belfast.
 Crook, Thomas T., Bolton.
 Crow, Harvey & Co., Glasgow.
 Daglish, Robert, & Co., St. Helens.
 Davy Brothers, Ltd., Sheffield.
 Death & Harris, Leicester.
 Douglas Forge Co., Ltd., Wigan.
 Entwistle & Gass, Ltd., Bolton.
 Fawcett, Preston & Co., Ltd., Liverpool.
 Fielding & Platt, Ltd., Gloucester.
 Fleming & Ferguson, Ltd., Paisley.
 Fowler, John, & Co. (Leeds), Ltd., Leeds,
 Fraser & Chalmers, Ltd., London.
 Fullerton, Hodgart & Barclay, Ltd., Paisley.
 Galloways, Ltd., Manchester.
 Hanna, Donald & Wilson, Paisley.
 Heald, John, Chorley.
 Henderson, John M., Aberdeen.
 Hoyle, Elkanah, & Sons, Ltd., Halifax.
 Jackson & Brother, Bolton.
 Jackson, P. R., & Co., Ltd., Manchester.
 Jessop & Appleby Brothers (Leicester and London), Ltd., Leicester.
 Kenworthy, Taylor & Co., Barnsley.
 Leeds Engineering and Hydraulic Co., Leeds.
 M'Kie & Baxter, Glasgow.
 Manlove, Alliott & Co., Ltd., Nottingham.
 Marshall, Sons & Co., Ltd., Gainsborough.
 Musgrave, John, & Son, Ltd., Bolton.
 Nasmyth, Wilson & Co., Ltd., Manchester.
 Needham Brothers & Brown, Barnsley.
 Pullan & Mann, Leeds.
 St. George's Ironworks, Ltd., Manchester.
 Simpson, James, & Co., Ltd., London.
 Saxon, George, Manchester.
 Scott & Hodgson, Manchester.
 Shanks, Alex., & Son, Ltd., Arbroath.
 Sharples, William, & Co., Ramsbottom.

**Winding Engines and Machinery—
—continued.**

Stevenson & Co., Ltd., Preston.
 Walker Brothers, Wigan.
 Walker, Eaton & Co., Sheffield.
 Walmsley, Charles, & Co., Ltd., Bury.
 Wilkinson, Wm., & Co., Ltd., Wigan.
 Wood & Gee, Wigan.
 Wood, John & Edward, Bolton.
 Worsley Mesnes Iron Works Co., Wigan.
 Wren, Henry, & Co., Manchester.
 Yates & Thom, Blackburn.

Winding Machinery—

(See Textile Machinery.)

Windlasses—Steam and Hand—

Clarke, Chapman & Co., Ltd., Gateshead-on-Tyne.
 Dryden, Thomas, Preston.
 Earle's Shipbuilding and Engineering Co., Ltd., Hull.
 Emerson, Walker & Thompson Brothers, Ltd., Gateshead-on-Tyne.
 Fisher & Co., Paisley.
 Hanna, Donald & Wilson, Paisley.
 Harfield & Co., Ltd., Blaydon-on-Tyne.
 Henderson, John M., Aberdeen.
 Napier Brothers, Ltd., Glasgow.
 Reid, Thomas, & Sons, Paisley.

Wire and Wire Rope—

Cammell, Charles, & Co., Ltd., Sheffield.
 Fowler, John, & Co. (Leeds), Ltd., Leeds.
 Fox, Samuel, & Co., Sheffield.
 Phosphor Bronze Co., Ltd., London.

Wire Drawing Plant—

Crossley, George, Ltd., Cleckheaton.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Hamer, S. H., Halifax.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hodgson, H. E., & Co., Cleckheaton.
 Wren, Henry, & Co., Manchester.

Wire-Working Machinery—

Birch, G., & Co., Manchester.
 Farmer, Sir James, & Sons, Ltd.,
 Manchester.
 Glover, M., & Co., Leeds.
 Hamer, S. H., Halifax.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hodgson, H. E., & Co., Cleckheaton.
 Kitson, J., & Sons, Ltd., Bradford.

Wood-Working Machinery—

Birch, P., & Co., Manchester.
 Clarke, T. A. W., Leicester.
 Cole, T. & W., London.
 Dickinson, John, & Co., Keighley.
 Entwistle & Gass, Ltd., Bolton.
 Glover, M., & Co., Leeds.
 Greenwood & Batley, Ltd., Leeds.
 Haigh, W. B., & Co., Oldham.
 Luke & Spencer, Ltd., Manchester.
 M'Dowall, John, & Sons, Johnstone.
 Sagar, J., & Co., Halifax.
 White, Thomas, & Sons, Paisley.

**Woollen, Worsted and Waste
Machinery—**

Atherton Brothers, Ltd., Preston.
 Brooks & Doxey, Ltd., Manchester.
 Butterworth & Dickinson, Burnley.
 Bywater, William, Leeds.
 Cliffe & Co., Huddersfield.
 Crossley, John, & Co., Halifax.
 Curtis, Sons & Co., Manchester.
 Dobson & Barlow, Ltd., Bolton.
 Hacking & Co., Bury.
 Haigh, John, & Sons, Ltd., Hudders-
 field.

**Woollen, Worsted and Waste
Machinery—continued.**

Hall & Stells, Keighley.
 Harding, Richardson, Rhodes & Co.,
 Ltd., Leeds.
 Hattersley, George, & Sons, Ltd.,
 Keighley.
 Hetherington, John, & Sons, Ltd.,
 Manchester.
 Holt, Thomas, Ltd., Rochdale.
 Hoyle & Preston, Keighley.
 Hutchinson, Hollingworth & Co.,
 Ltd., Huddersfield.
 Jefferson, Joseph, & Brothers, Brad-
 ford.
 Kenworthy, Royston & Co., Hudders-
 field.
 Kilburn, R., & Sons, Leeds.
 Leach & Co., Rochdale.
 Lees, Asa, & Co., Ltd., Oldham.
 McNaught, John & William, Rochdale.
 Petrie, John, Jun., Ltd., Rochdale.
 Platt Brothers & Co., Ltd., Oldham.
 Ramsden Brothers, Keighley.
 Ratcliffe, J., & Sons, Leeds.
 Smith, Prince, & Son, Keighley.
 Smith, William, & Brothers, Ltd.,
 Manchester.
 Stubbs, Joseph, Manchester.
 Sykes, John, & Sons, Ltd., Hudders-
 field.
 Tatham, William, & Co., Rochdale.
 Taylor, Lang & Co., Ltd., Staly-
 bridge.
 Taylor, Wordsworth & Co., Leeds.
 Whiteley, William, & Sons, Ltd.,
 Huddersfield.
 White, W. B., Colne.

Yacht Builders—

(See Shipbuilders; also Launches and
 Yachts.)

Yarn-Preparing Machinery—

(See Woollen, Worsted and Waste
 Machinery; also Textile Machinery.)

Zinc-Working Machinery—

(See Machine Tools.)



The Engineering Employers' Federation.

SUPPLEMENTARY LIST OF MEMBERS.

No. 1

N.B.—This List contains the Names of the new Members admitted during 1899 and January—July, 1900.

It should be consulted along with original List of Federated E. & S. Employers issued in December, 1898.

(ARRANGED IN ALPHABETICAL ORDER.)

THE ENGINEERING EMPLOYERS' FEDERATION,
105 WEST GEORGE STREET, GLASGOW.

August, 1900.

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).		TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
		AIRDRIE	IRON			
Airdrie Iron Co.,	Engineers, Ironfounders, Boilermakers	Airdrie Iron Works	...	Airdrie	Iron, Airdrie	6 Airdrie
Akroyd, William	Ironfounder	New Bank	...	Halifax	...	57
Alder & Mackay	Brassfounders	Gorgie Road	...	Edinburgh	Alder, Edinburgh	81 Western
Allen, James	Hosiery Accessories Maker	Parkinson Street	...	Nottingham	...	81
Anderson & Co.	Ironfounders	...	...	Musselburgh	Foundry, Musselburgh	28A
Anderton, Alfred, & Sons	Boilmakers	Antley Boiler Works	...	Accrington	Boiler, Church	136
Archdale, James, & Co.	Machine Toolmakers	Ledsam Street	...	Birmingham	Archdale, Birmingham	3558
Baldwin, Samuel	Engineer, Hoistmaker, Millwright, etc.	Bethesda Works	Street	Iron	S. Baldwin, Engineer, Burnley	154 National
Balmforth Bros., Ltd.	Engineers and Cranemakers, etc., etc.	Peelings Foundry	...	Rodley, near Leeds	Balmforth, Rodley	36 Stan-ningley.
Beath & Keay	Ironfounders and Millwrights	Albion Foundry	...	Dundee	...	412
Bennie, John, & Sons	Brassfounders	Waverley Brassworks,	...	Edinburgh	...	...
Bell, Charles	Engineer	56 Fountainbridge Bath Street, Leeds Road	...	Bradford	Ironer, Bradford	244
Belliss & Morcom, Ltd. (<i>Late G. E. Belliss & Co., Ltd.</i>)	Engineers	Ledsam Street Works	...	Birmingham	Belliss, Birmingham	3518
Billings, M., & Son	Ironfounders	Causeway Lane	...	Leicester	Billings, Leicester	589
Blair & Wheater	Machine Toolmakers	Tyne Tool Works	...	Wallsend-on-Tyne	...	36 National

Britannia Co., The	... ...	Engineers, Toolmakers, and Ironfounders	Britannia Works	... Colchester	... Britannia, Colchester	47 National
Broadfoot, John, & Sons	... ...	Engineers and Brassfounders	Inchholm Works, White-inch	... Glasgow	... Broadfoot	... 103 Hillhead
Bromilow, John	... ...	Brass and Aluminium Founder and Finisher	William Street Brass and Aluminium Works	... Heywood	... Brass, Heywood	1129
Brookfield Foundry Co., The	... ...	Engineers and Ironfounders	St. Mary's Street	... St. Helens	... ...	52
Brook, Henry, & Co., Ltd.	... ...	Ironfounders	Colne Road	... Huddersfield	... ...	247
Brown, David, & Sons	... ...	Patternmakers and Gear Cutters	East Parade	... Huddersfield	Gearing, Huddersfield	80
Buchanan, James, & Co.	... ...	Brassfounders	Victoria Brass Foundry, 236 Leith Walk	Edinburgh	... ...	...
Buchanan, James, & Son	... ...	Engineers and Ironfounders	Caledonia Foundry, 105 Brasenose Road	Liverpool	... Buchanan, Liverpool	132 Bootle
Bull's Metal and Melloid Co., Ltd.	... ...	Bronze and Brass Manufacturers	6 Jeffrey's Square, St. Mary Axe	London, E.C.	Melloid, London	4378
Burrell, Chas., & Sons, Ltd.	... ...	Traction Engine Manufacturers	... ...	Thetford, Norfolk	Burrell, Thetford	...
Catton & Co., Ltd.	... ...	Steel Castings Manufacturers	Hunslet	Leeds	Cattons, Leeds	561
Chadwick Machine Co., Ltd., The	... ...	Machine Makers	High Street Mills	... Cleckheaton, Yorks.	Chadwick, Cleckheaton	83
Chatwin, Thomas	... ...	Engineers' Tool Manufacturer	Victoria Works, Great Tindal Street	Birmingham	Chatwin, Birmingham	...
Chester, Edward, & Co., Ltd.	... ...	Engineers and Boilermakers	... ...	Renfrew	... ...	...
Clayton Engineering and Electrical Construction Co., Ltd., The	... ...	Electrical and General Engineers	Newton, Hyde	... Nr. Manchester	Dynamo, Hyde	62 Hyde
Clayton & Shuttleworth	... ...	General Engineers and Thrashing Machine Manufacturers	Stamp End Works	... Lincoln	Claytons, Lincoln	43 National

Electric Construction Co., Ltd., The	Electrical Engineers ... , etc.	Bushbury Engineering Works	Wolverhampton	Electric, Wolverhampton	75
Electromotors, Limited	Manufacturers of Electric Motors, etc.	Tomlinson Street, Hulme	Manchester ...	Magnet, Manchester	4442
Empsall, W. H.	Brassfounder and Finisher ...	25 Nelson Street ...	Bradford ...	... ...	1437
Ewen & Mitton,	General Engineers ...	Smithfield Works, Sherlock Street	Birmingham ...	Method, Birmingham	1402
Ewing & Lawson	Boilermakers and Engineers	Crownpoint Boiler Works, Crownpoint Road, and St. Marnock Street, Mile-End	Glasgow ...	Diameter, Glasgow	2597
Fairfield Shipbuilding and Engineering Co., Ltd., The	Engineers and Shipbuilders	...	...	Fairfield ...	...
Falcon Iron Works, Ltd., The (formerly John Wild & Co., Ltd.)	Colliery Engineers ...	Falcon Iron Works ...	Govan, near Glasgow	...	557 Royal 59 Govan
Farrar, James	Wood Turner and Patternmaker	...	...	Fairfield ...	...
Feather, William, & Co.	Toolmakers ...	Emmitt's Court, Gaol Lane	Halifax ...	...	...
Ferguson & Co.	Ironfounders ...	Hope Street ...	Halifax ...	...	...
Fieldhouse, Crossfield & Co., Ltd.	Printers' Engineers ...	Short Street ...	Leicester ...	...	746
Foden, Edwin, Sons, & Co., Ltd.	General Engineers ...	Wharfedale Foundry ...	Otley ...	Reliance, Otley	...
Forrest & Son, Ltd. ...	Engineers and Shipbuilders	Elworth Works, Sandbach	Manchester ...	Foden, Sandbach	...
		Shipyard ...	...	Wyvenhoe, Essex;	Forrestiere, London
		for Leadenhall Street ...	...	London, E.C.	5942 Avenue

NAME.	NATURE OF BUSINESS,	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Foster Brothers & Co.	Ironfounders	Hope Foundry ...	Preston	Hope Foundry, Preston	82
Foster, Sidney & Co.	(See Sidney, Foster & Co.)				
Foster, Wm., & Co., Ltd.	Agricultural and General Engineers	Wellington Foundry, Firth Road	Lincoln	Foster, Lincoln	18
Furneavall & Co., Ltd.	General Engineers and Ironfounders	Union Foundry ...	Haslingden	Furneavall, Haslingden	1
Furse, W. J., ...	Electrical Engineer	17 Burton Street ...	Nottingham	Furse, Nottingham...	539
Gaukrodger, Sykes & Roberts, Ltd.	Valvemakers, Brassfounders, etc. ...	Spring Hall Lane	Halifax	Brass, Halifax	204
Gibb & Hogg, Ltd.	Engineers and Ironfounders ...	Victoria Engine Works...	Airdrie	Hogg, Airdrie	12
Grange Iron Co., Ltd., The	General Engineers	Grange Iron Works ...	Durham	Grange, Durham	5 P.O.
Grangemouth and Greenock Dockyard Co., The	Shipbuilders and Ship-repairers ...	... ... ...	Grangemouth	Dockyard, Grangemouth	11 Durham
Grocers' Engineering Co., The	Manufacturers of Tea, Coffee, Cocoa, etc., Machinery	Cole Street, Swan Street	London, S.E.	Metrical, London	760 Hop.
Hart, David, & Co.	Engineers and Ironfounders ...	Wenlock Road, City Rd.	London, N.	733 King's Cross	733 King's Cross
Hastie, John, & Co., Ltd.	Engineers	Kilblain Engine Works, Princes Street	Greenock	Hastie, Greenock	133
Hattersley, R. E., & Co.	Tool Manufacturers ...	Spring Hall Lane	Halifax	Brass, Halifax	204

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Lord, J. K. & R.	Boilermakers ...	Barnbrook Boiler Works ...	Bury ...	...	...
Lord, William	Boilermaker ...	Lord Street Boiler Works ...	Bury ...	...	0249
Lowca Engineering Co., Ltd. The	Engineers, Ironfounders, and Boilermakers	Lowca Engine Works ...	Whitehaven	Lowca, Parton, Cumberland	88
Lund, Samuel, & Sons,	Ironfounders ...	Midland Foundry ...	Keighley	Lunds, Ironfounders, Keighley	142
Mackenzie Brothers	Ironfounders ...	Slateford Road ...	Edinburgh ...	Iron, Edinburgh	67 Western
M'Kenzie, J., & Co., ...	Ship and Boatbuilders and Re-pairers	44 Sandport Street ...	Leith	...	...
M'Keown, J. & J.	Ironfounders and Smiths ...	Grosvenor Street ...	Belfast	...	923
M'Millan, Archibald, & Co. ...	Coppersmiths and Brassfounders ...	Smith Works Shrub Place, Leith Walk	Edinburgh	Vacuum, Edinburgh	4043
MacTaggart, Scott & Co. ...	Hydraulic and General Engineers ...	Station Iron Works, Loanhead	Near Edinburgh	Valve, Loanhead	12 Loanhead
Mallinson, J. & J.	Engineers' Toolmakers ...	Lucy Street, New Bank	Halifax	...	...
Mallinson Brothers (JOHN MALLINSON)	Machine Toolmakers ...	Hipperholme ...	Near Halifax	...	...
Marshall & Co. ...	General Engineers and Motor Car Builders	Belsize Works, Clayton Lane, Clayton Oak Tree Iron Works, Regent Road	Manchester	Belsize, Manchester	1849
Martin, G. & W.	Engineers, Boilermakers, and Blacksmiths ...	Aberdeen	Aberdeen	...	...

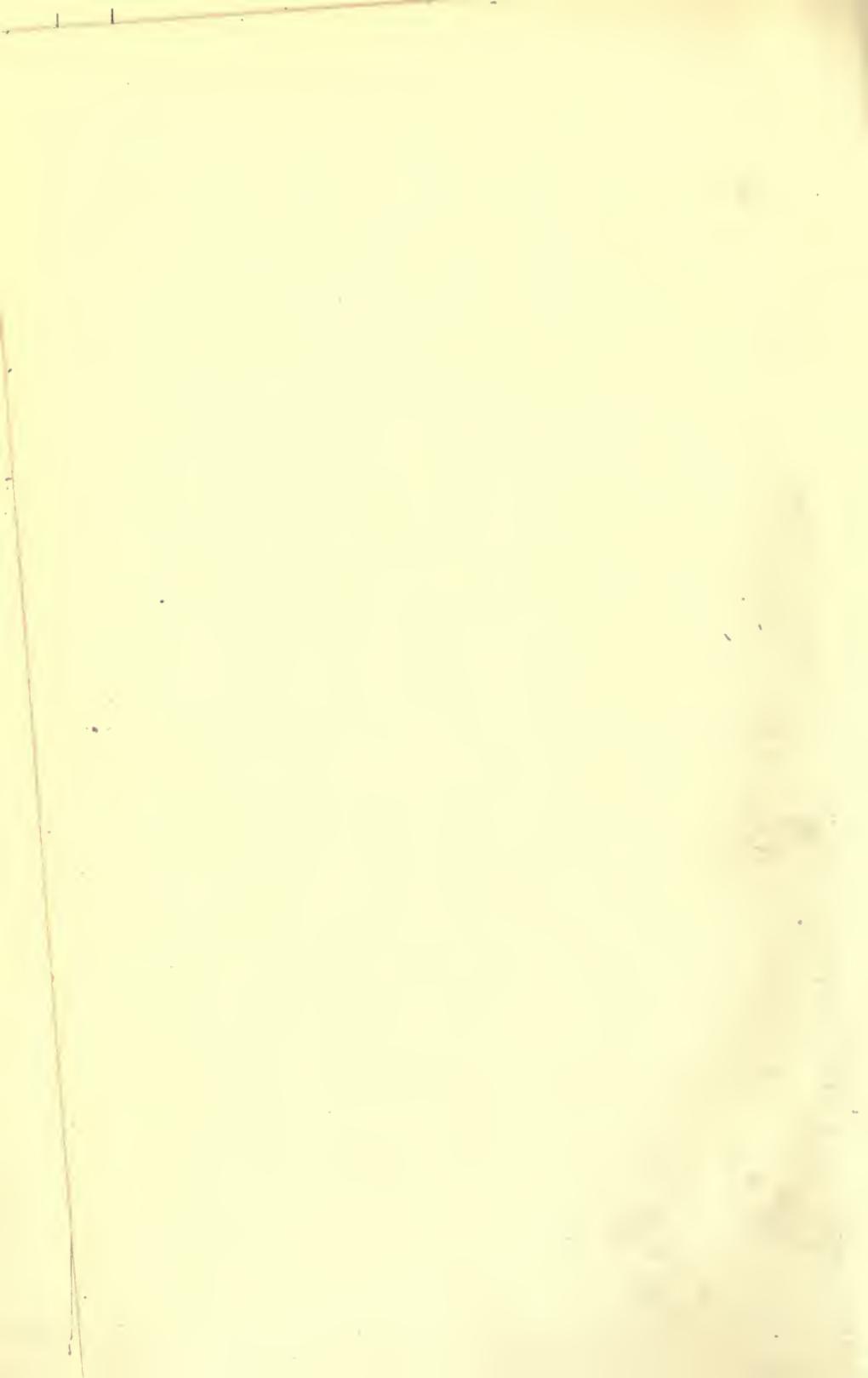
Milburn, John ...	Engineer and Ironfounder ...	... ...	... Aspley ...	3 Vicarage Street	... Wakefield	... Workington ...	Milburn, Engineer ...	17 National
Mills, Edwin, & Son ...	Engineers ...	... ...	... ...	39 Victoria Street, West-minster	London, S.W.	Huddersfield	Omo, Huddersfield...	251
Milthorpe, G. & F., Ltd.	Printers' Engineers and Printing Ink Manufacturers	... ...	... ...	Harleston Iron Works ...	Sheffield	... Milthorpe, Wakefield	75	
Moffatt & Eastmead, Ltd.	Engineers ...	... ...	... ...	Parkhead Boiler Works	Glasgow	... Hoistway, London	... ...
Moorwood, Sons & Co., Ltd.	Engineers, Ironfounders, and Cooking Apparatus Manufacturers	... ...	... ...	Culver Street Works	Colchester	... Moorwoods, Sheffield	39, 2298, and 2289	
Muir & Findlay	Boilermakers ...	... ...	... ...	St. Ann's Iron Works ...	Belfast	... Endurance, Glasgow	2634	
Mumford, Arthur G. ...	Engineer ...	... ...	... ...	Dundas Street, Bootle ...	Liverpool	... Mumford, Colchester	... ...
Musgrave & Co., Ltd.	Ironfounders and Ironfitters	... ...	... ...			... Musgrave, Limited	68	
Musker, C. & A., Ltd.	Hydraulic Engineers ...	... ...	... ...			Fulgor, Liverpool ...	104 Bootle	
Neill, W., & Son ...	Engineers, Boilermakers, Iron and Brass Founders, etc.	... ...	... ...	Bold Iron Works,	St. Helens Junction	Neil, St. Helens ...	20 St. Helens ...	
Newsome, William, & Son ...	Engineers and Brass Founders	... ...	... ...	Hereford St., Ordsall Lane Reg. Office : 34 Crowther Street, Regent Road Dudley Hill	Sowerby Bridge	... Newsome, Sowerby Bridge	39	
New Steam Stamp Mill Syndicate, Ltd., The	Manufacturers of Steam-Stamp and Ship Repairing Work	... ...	... ...	Alfred Street Mills	Salford	... Vortex, Manchester	2733	
Newton & Bean	Engineers and Ironfounders	... ...	... ...	Dudley Hill	Bradford	... Adroit, Dudley Hill	2	
Newton & Pycroft	Lace Machine Builders	... ...	... ...	Nottingham ...	... ...	... ...	771	
Nicholson, W. N., & Sons, Ltd.	Engineers ...	... ...	... ...	Newark-on-Trent	... Newark-on-Trent	Nicholson's, Newark ...	... ...
Nicholson Tool Co., The Jos. C.	Machine Tool Manufacturers	... ...	... ...	Collingwood Street	Newcastle-on-Tyne	... Newcastle-on-Tyne	1532	
Northern Engineering Co., Ltd., The	Engineers ...	... ...	... ...	Works :—City Road	Halifax	... Neco, Halifax ...	270	
						... ...	239	

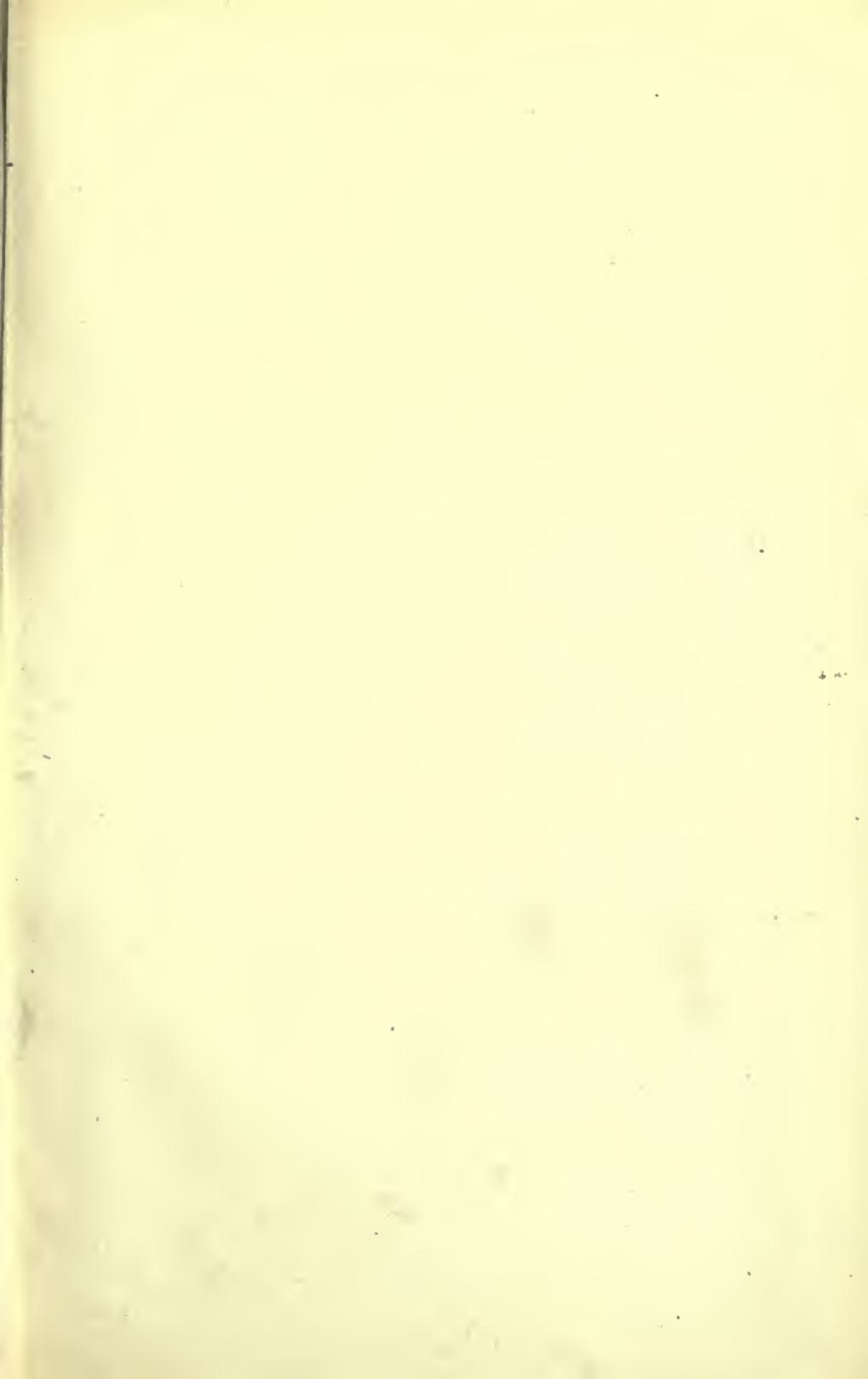
NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Oldfield & Schofield	... Engineers' Toolmakers	... Central Iron Works	... Halifax	... ...	121 National
Parkinson, Thomas	Brass and Ironfounder and Machinist	Britannia Works, Canterbury Street	Blackburn	... ...	15
Park, W., & Co.	General Engineers	... ...	Wigan	... Park, Wiend, Wigan	67
Parson's Marine Steam Turbine Co., Ltd., The	Marine Engineers	... Turbinia Works	... Wallsend R.S.O.	Turbinia, Wallsend	220
Partington & Co.	Boilermakers	... ...	Bradford	... Partington, Bradford	198
Pattison, E., & Co.	Ironfounders	... St. Peter's Lane	Leicester	... Pattison, Leicester ...	648
Peberdy & Earp	Machinists	... Farnham Street	Leicester	... ...	...
Penman & Co.	Boilermakers	... Strathclyde Street, off Dalmarnock Road	Glasgow	... Penman, Glasgow ...	2544
Peppermill Brass Foundry Co., The	Brassfounders	... ...	Wigan	... Pepper, Wigan ...	19
Piercy & Co.	Engineers and Ironfounders	Broad St. Engine Works and Oozells St. Fdy.	Birmingham	Piercy, Birmingham	20
Piggott, Thomas, & Co., Ltd.	Engineers	... Atlas Works, Spring Hill	Birmingham	Atlas, Birmingham	86
Player, W. J.	Engineers	... Lionel Street	... Birmingham	Players, Birmingham	1310
Pollard, James	Iron and Brassfounder and Millwright	... Atlas Works	... Burnley	Pollard, Atlas Works	94
"Premier" Gas Engine Co., Ltd., The	Gas Engine Manufacturers	... Sandiacre ...	Near Nottingham	Premier, Sandiacre	39 Long Eaton
Primrose & Co.	Ironfounders	... Albert Foundry, Jane St.	Leith	... ...	4189

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.).	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE NO.
Shaw, W., & Co. ...	Steel Founders ...	Wellington Foundry ...	Middlesbro-on-Tees	Wellington, Middlesbro	106
Sidney, Foster & Co. ...	Patternmakers ...	St. John's Works, Lister Lane ...	Halifax	... ...	...
Simpson, Strickland & Co., Ltd. ...	Engineers ...	... ...	Dartmouth	Engineers, Dartmouth	2
Smith Brothers & Eastwood ...	Engineers ...	... ...	Bradford	Engineers, Bradford	1143
Smith's Injector Co., Ltd. ...	Brassfounders ...	Station Street ...	Nottingham	Injector, Nottingham	146
Snowden, John ...	Boilermaker ...	Kingston Boiler Works, Hull ...	Hull	... ...	508
Spurr, Inman & Co., Ltd. ...	Boilermakers ...	Oxford Street Caldervale Boiler Works	Wakefield	Spurinman, Wakefield	37
Stanford & Co. ...	General Engineers ...	High Street ...	Colchester	Stanford, Engineer, Colchester	...
Stewardson & Co. ...	Coppersmiths and Brassfounders ...	Albert St., Leith Walk ...	Edinburgh	Stewardson, Edinburgh	• 169
Stirling Boiler Co., Ltd. ...	Boilermakers ...	2 St. Andrew Square ...	Elgin	Coppersmiths, Elgin	24
Summerscales, W., & Sons, Ltd. ...	Laundry Engineers ...	Phoenix Foundry ...	Edinburgh	Evaporate ...	1256
Swift & House ...	Engineers and Ironfounders ...	Union Foundry, Pemberton	Keighley	Phoenix, Keighley	92 Keighley
Taylor, Charles ...	...	Near Wigan	...	...	...
Taylor, C. H., & Son ...	...	...	...	...	...
Bartholomew Street ...	...	...	Birmingham	Lathes, Birmingham	401
Cyclops Foundry ...	...	...	Leeds	...	116

NAME.	NATURE OF BUSINESS.	ADDRESS (STREET, ETC.)	TOWN.	TELEGRAPHIC ADDRESS.	TELEPHONE No.
Ward Brothers ...	Machine Makers (Dobbies and Accessories)	Ingham St. Iron Works	Blackburn	...	...
Ward, H. W., & Co.	Machine Toolmakers	Lionel Street	Birmingham	Tudor, Birmingham	360
Watt, James, & Co. ...	Engineers	Soho Foundry	Birmingham	Watt, Soho, Smethe-wick	1469
Weiss, Joseph, & Co.	Forgemasters ...	Irwell Forge and Rolling Mill 140 Thornton Road 23 College Hill, Cannon St.	Bradford London	Forge, Bury	2034
West's Patent Power Tyre-Setter Syndicate	Hydraulic Engineers ...	Portland Harbour Torpedo Works	Weymouth	Acrostical, Bradford Acrostical, London	72
Whitehead & Co. ...	Torpedo Manufacturers	...	Wickham Market	Whitehead, Wyke Regis, Weymouth Wickham Market	6
Whitmore & Binyon, Ltd. ...	Millwrights, Engineers, etc.	Mark Lane, ... St. Thomas Works, Granville Street Byron Street and Canterbury Street	London	Accelerate, London Birmingham	366 and 1437
Winn, Charles, & Co. ...	Engineers and Brassfounders	...	...	...	87
Winter, Thomas, & Co., Ltd.	Engineers, Toolmakers, Brass and Ironfounders, and Coppersmiths	...	Halifax	Automatic, Blackburn	...
Woodhead, William, & Co. ...	Engineers' Toolmakers	...	...	...	...
Woodhouse & Co. ...	Brass and Ironfounders	...	Doncaster	Woodhouse, Don- caster	4
Workington Bridge and Boiler Co., Ltd.	Manufacturers of Bridge-building Plant, etc.	...	Workington	Marley	29 Workington
Wright, Edward ...	Engineer	15 Gordon Street	Bradford	...	1316
Wright, J. & T. ...	Engineers and Ironfounders,	Platt Bridge	Near Wigan	...	...
Wright, Samuel ...	Ironfounder	...	Leicester	...	96

NAME.	NATURE OF BUSINESS,	ADDRESS (STREET, ETC.)	TOWN.	ADDRESS.	NO.
Addendum. Omitted from "48 Hours" List :— Hawthorn, R. & W., Leslie & Co., Ltd.	Marine Engineers, Locomotive Builders, and Shipbuilders	Forth Banks	... Newcastle-on-Tyne	Locomotive ... Tyne	1232 Nat. 413 P.O.





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